

曾侯乙墓

战国早期的礼乐文明

Tomb of Marquis Yi of Zeng

Ritual-and-music Civilization in the Early Warring States Period

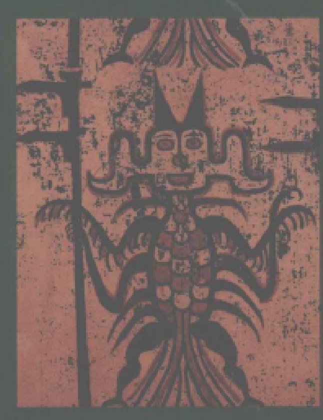
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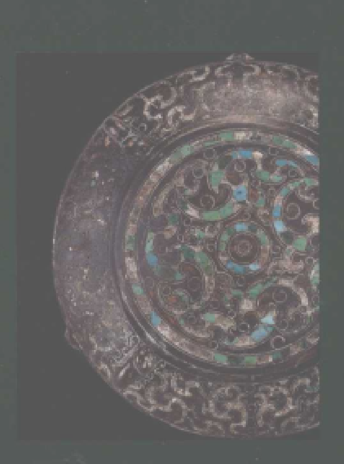
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　　　　　郭维富
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主编：王红星
Chief editor: Wang Hongxing

副主编：王纪潮
Deputy chief editor: Wang Jichao

撰稿：王纪潮　张　翔
Contributor: Wang Jichao and Zhang Xiang

资料整理：翁　蓓　韩壮丽
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文物摄影：郝勤建
Photography of cultural relics: Hao Qinjian

现场摄影：潘炳元
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湖北省博物館
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■ 长江中游文明之旅 | A Journey to Mid-Yangtze River Civilization

曾侯乙墓

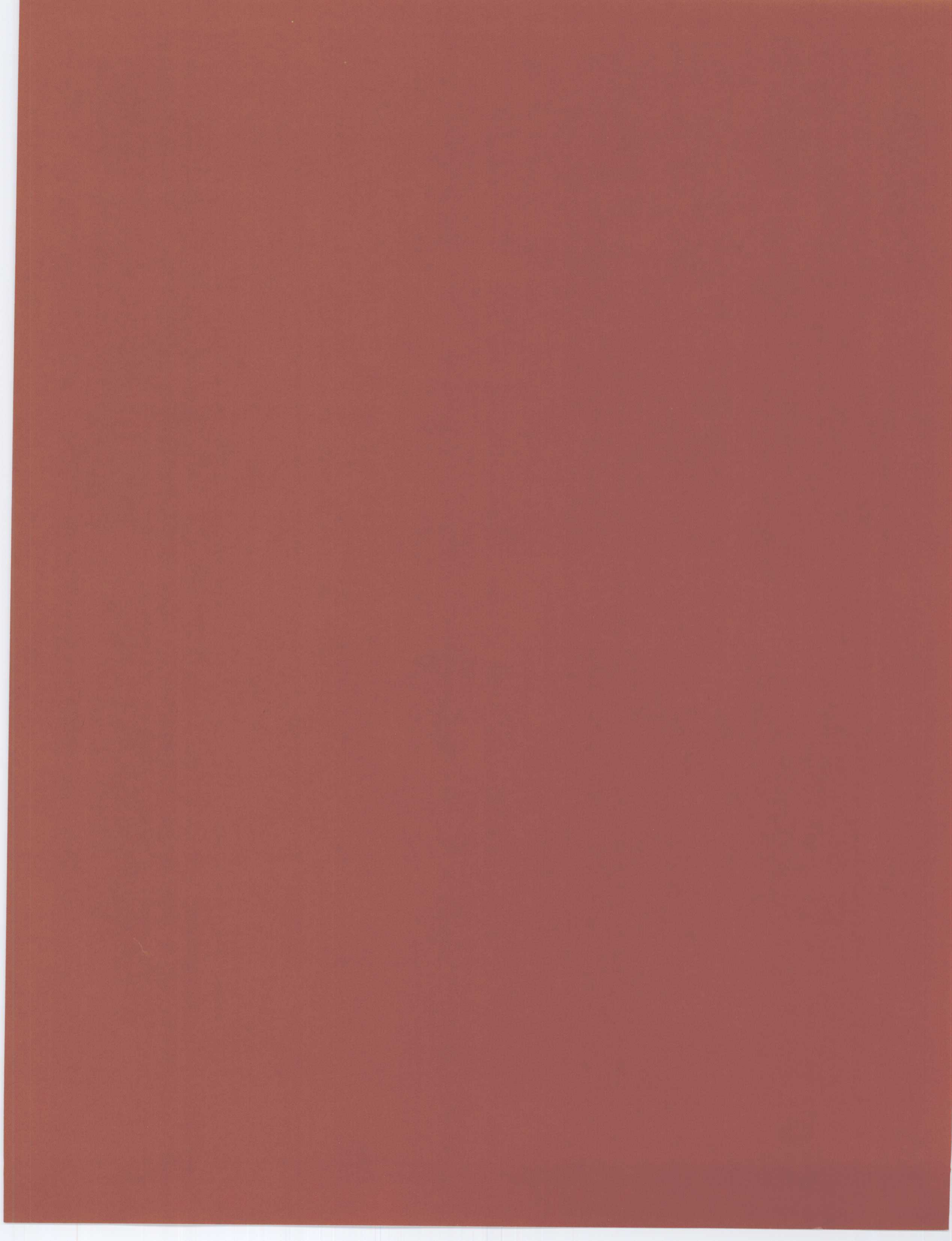
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■ 湖北省博物馆 编
Hubei Provincial Museum

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序

湖北历史悠久，文化遗存丰富。截至目前，湖北境内已普查出不可移动文物点1.5万余处，其中全国重点文物保护单位90处，省级文物保护单位457处，武当山古建筑群、钟祥明显陵先后被列入世界文化遗产名录。无论是文物点的总量，还是文物单位的保护级别，湖北都位居全国前列。

中华人民共和国成立后的考古工作，完全改写了湖北的历史，证实这里同样是中华文明的生长点。两个完整的、距今100万年的直立人——“郧县人”头骨的发现，证明这里也是探索人类起源最重要的地区之一；距今5000年的“屈家岭文化”以发达的稻作农业，功能齐全的史前城址，昭示这里同样是文明起源的发源地；商代的“盘龙城”、两周时期的铜绿山古矿冶遗址和被誉为“地下乐宫”的曾侯乙墓的发现，说明这里的青铜文明同样绚丽多彩；江陵纪南城、望山楚墓、马山楚墓，荆门包山楚墓、郭店楚墓，枣阳九连墩楚墓等重要考古发现，印证楚文化曾在湖北地区达到鼎盛时期；大量秦汉至唐宋遗存的发现，以及明代楚昭王、郢靖王和梁庄王等一批明代藩王墓的发掘，丰富了地方文化历史的研究资料。

负责全省文物保护、收藏、展示的湖北省博物馆，于1953年3月成立筹备处；1959年春迁至今址东湖风景区；1963年1月正式更名为湖北省博物馆，3000平方米的陈列楼建成并对外开放；1999年1月，建筑面积5717平方米的编钟馆建成开放；2005年12月，楚文化馆建成开放；2007年9月，新馆综合陈列馆建成开放。至此，湖北省博物馆总占地面积达81909平方米，建筑面积49611平方米，展厅面积13427平方米，馆藏文物14万余件（套），其中一级文物千余件（套），位居全国省级博物馆前列。

借新馆综合陈列馆开放之机，我们一改过去通史陈列的方式，根据馆藏文物特点，新推出了十一个专题陈列。《郧县人——长江中游的远古人类》以镇馆之宝“郧县人”的发现为主线，扩展至湖北境内旧石器时代遗存的发现，辅以世界范围内早期人类起源的资料，试图使观众对早期人类的生活有个概略的了解；《屈家岭——长江中游的史前文化》则上推至距今8000多年前的城背溪文化，下连到距今4000年前的石家河文化，力图全方位地揭示长江中游地区新石器时代农业的发生、人类的定居生活以及文明的发生过程；《盘



龙城——长江中游的青铜文明》展示的是商代“南土”今黄陂盘龙城城址的考古发现，证实由于大冶铜绿山铜矿资源系统的存在，促使商文化南下，客观上促进了长江中游的文明进程；《曾侯乙墓》是我馆的精品陈列，这次展览在原有的基础上，展示面积有所扩大，展品也有所增加，较为全面地反映了曾侯乙时代的礼乐文化；《九连墩纪事》重点讲述的是九连墩的考古发掘过程和楚国高级贵族墓的墓葬文化；《秦汉漆器艺术》将我馆所藏最具特色的秦汉漆器集中展示，对漆器的制作工艺和艺术特点作了重点阐释；《书写历史——战国秦汉简牍》是举办同类展览的一个新的尝试，即以湖北出土的战国秦汉简牍和书写工具实物为主，上溯至原始社会的刻划符号和陶文，辅以世界各地的书写历史背景，使观众对书写的历史有个较全面的了解；《土与火的艺术——古代瓷器专题展》以青瓷、青花瓷、官窑瓷器为重点，展示了馆藏瓷器的精品；《梁庄王墓——郑和时代的瑰宝》展示的是明代梁庄王墓的出土遗物；《明清书画——湖北省博物馆藏书画展》从馆藏书画中选取了明清时期较有代表性的绘画、书法流派人物的作品予以介绍；《荆楚百年英杰》展示了近代以来，对中国近现代历史、科学文化和经济建设有过重要影响和做出突出贡献的湖北籍或在湖北长期工作过的革命家、历史人物、文化俊杰和科教精英的简要生平事迹，旨在让人们永远记住他们。这些展览力图通过不同的截面，展示湖北历史和文化的闪光点，通过文物来勾画湖北历史发展进程的粗略线条，让观众在此领略我们祖先的聪明才智，也使我馆成为人们心灵对话、交流的场所，成为人们追求精神生活不可或缺的精神家园。

为配合展览，我们推出了这套“长江中游文明之旅”丛书，每本书都还约请有关专家撰写文章，或概要介绍文化背景，或集中阐述文化内涵。每本书都以文物图片为主，辅以简单的说明。总的目的是为读者能够方便和深入地了解湖北的历史和文化，并保留一份记忆。

湖北省博物馆馆长
湖北省文物考古研究所所长
湖北省文物保护中心主任　王红星

Preface



Hubei, which has a long history, abounds in cultural heritages. Up to now, more than 15,000 immoveable sites have been registered, including 90 major historic sites under national protection and 457 under provincial protection. The ancient architectural complex at Wudangshan and Xian Mausoleum of the Ming Dynasty in Zhongxiang have been inscribed into World Heritage List. The province ranks high in the country in both the number and the protection grades of sites.

Since the founding of the PRC, archaeological research has totally changed the history of Hubei, proving that it was also one of the origins of the Chinese civilization. The discovery of two integral crania of Yunxian Man, a *Homo erectus* species dating from one million years ago, shows that Hubei is one of the most important regions for exploring the origin of human being. Qujialing Culture, which dates from 5,000 years ago, with well-developed rice-growing agriculture and functionally complete prehistoric sites, indicates that the region was a cradle of civilization. Panlongcheng of the Shang Dynasty, the mining and smelting site at Tonglüshan of the Zhou Dynasty, and the tomb of Marquis Yi of Zeng, which is called 'underground musical palace', reflect a brilliant bronze civilization. Jinancheng at Jiangling and Chu tombs at Wangshan, Mashan, Baoshan in Jingmen, Guodian, and Jiuliandun in Zaoyang prove that Chu culture reached its heyday in Hubei. The discovery of a large quantity of heritages dating from the Qin and Han dynasties through the Tang and Song dynasties, together with the excavation of tombs of Ming feudal princes such as Prince Chuzhao, Prince Yingjing and Prince Liangzhuang, has enriched data for the study of local history and culture.

Hubei Provincial Museum is designed to protect, collect and display cultural heritages in the province. It was founded in the form of a preparatory office in March



1953, which was moved to Donghu scenic area, its present location, in the spring of 1959. It was officially named Hubei Provincial Museum in January 1963, when a 3,000-square-meter exhibition building was completed and opened to the public. In January 1999, the Exhibition Hall for Set-bells, which covers a floor space of 5,717 square meters, was opened. In December 2005, the Exhibition Hall for Chu Culture was opened. In September 2007, the new Comprehensive Exhibition Hall was opened. At present, the museum covers a total area of 81,909 square meters and a floor space of 49,611 square meters. Its exhibition halls cover a floor space of 13,427 square meters. It has a collection of more than 140,000 pieces (sets) of cultural heritages, among which there are nearly 1,000 pieces (sets) of first-grade cultural relics, ranking high among all provincial museums in China in this regard.

As the new Comprehensive Exhibition Hall opened, based on characteristics of our collection, we replaced our general-history exhibition with eleven theme exhibitions:

Yunxian Man: Prehistoric People in the Middle Reaches of the Yangtze, centering on the discovery of Yunxian Man fossils (treasure of the collection) and covering the discoveries of other Paleolithic heritages in Hubei, with supplementary information about the origin of the early man from all over the world, presents a general picture of the life of the early man.

Qujialing: Prehistoric Culture in the Middle Reaches of the Yangtze, tracing upward to Chengbeixi Culture dating from over 8,000 years ago and downward to Shijiahe Culture dating from 4,000 years ago, reveals the birth of Neolithic agriculture in the middle reaches of the Yangtze as well as the advent of settled life and civilization.

Panlongcheng: Bronze Civilization in the Middle Reaches of the Yangtze, which

displays archaeological finds from the Panlongcheng site in Huangpi, the southern outpost of the Shang Dynasty, proves that the existence of copper resources at Tonglüshan, Daye, prompted the Shang culture to go south, which objectively contributed to civilization in the middle reaches of the Yangtze.

Tomb of Marquis Yi of Zeng is one of the best exhibitions offered by the museum. It has been expanded in area and increased in number of exhibits in order to show a complete picture of the rite-and-music culture in the times of Marquis Yi.

Records on Jiuliandun concentrates on the process of archaeological excavation and the burial culture reflected by tombs of senior nobles of Chu.

The Art of Lacquered Articles in the Qin and Han Dynasties, which displays the most characteristic Qin and Han lacquered articles collected by the museum, focuses mainly on techniques and artistic features.

Writing History: Bamboo Slips of the Warring States Period, the Qin Dynasty and *the Han Dynasty* is a pilot project for similar exhibitions in the future. Displaying bamboo slips, wooden tablets and writing tools unearthed in Hubei and tracing back to primitive engraved signs and pottery inscriptions, with supplementary information about the evolution of writing in other parts of the world, it offers visitors a comprehensive introduction to the history of writing.

The Art of Earth and Fire: Ancient Porcelain, focusing on celadon, blue-and-white porcelain and official-kiln porcelain, displays the best porcelain articles collected by Hubei Provincial Museum.

Tomb of Prince Liangzhuang: Treasure of the Era of Zheng He shows heritages unearthed from the Ming tomb of Prince Liangzhuang.



Ming and Qing Paintings and Calligraphic Works Collected by Hubei Provincial Museum features works by representative painters or calligraphers in the Ming and Qing dynasties.

Outstanding Figures over a Century in Hubei features stories of revolutionaries, historical figures and elites in culture, science and education from Hubei or working in Hubei for a long time, who were outstanding in their impact on or contribution to the history, science, culture or economic development of China in modern times. Therefore, these famous persons would be remembered for ever.

These exhibitions present highlights in the history and culture of Hubei from different perspectives, and outline the past of Hubei by various cultural heritages. Thus visitors have access to admire the wisdom of our ancestors while the museum becomes a valuable platform for intelligent dialogues and exchanges.

A series of albums has been published to meet the needs of the exhibitions. Each album contains an article written by an expert, which either gives brief information to the cultural background or concentrates on the cultural significance. The main part consists of pictures of cultural heritages with simple illustrations. They are generally designed to provide easy access to in-depth knowledge of the local history and culture in Hubei.

Curator of Hubei Provincial Museum
Director of Hubei Provincial Institute of Cultural Relics and Archaeology
Director of Center for Protection of Cultural Relics in Hubei

Wang Hongxing

曾侯乙墓发现记

谭维四

1978年2月的最后一个夜晚，一阵急促的呼唤声打破了湖北省博物馆院内的宁静。“谭队长,长途电话。襄阳地区文博馆有急事找你。”20多年来任文物考古队长的经历告诉我，每当冬闲季节，各地大搞工农业基本建设，地下就会不断有重要文物古迹被发现。深夜地县文博部门的长途电话少不了是这类事情。果然，襄阳地区文博馆负责人王少泉在电话中急切地说：随县文化馆电话报告，当地驻军的雷达修理所扩建厂房开山炸石时，在红砂岩石头山上炸出一大片褐色土，里面好像还有人工铺砌的石板。他们怀疑是一座大型古墓。

3月19日,我和考古技术人员赶到随县。经过勘察，的确是一座古墓，墓坑呈不规则多边形，东西最长处21.5米，南北最宽处16.5米，总面积达200多平方米。这么大的一座“岩坑竖穴墓”过去还没有发现过。勘探还查明，墓的中部有一个盗洞。这个情况给我们心里留下疑团，此墓究竟被盗走了多少东西?

经报请国家文物局批准后，我们于5月11日开始了发掘工作。木椁由十二道椁墙组成东、中、西、北四室。揭开椁板后，除了漂浮在水面的几副棺木而外，整座墓都隐没在积水之中。抽水机日夜



湖北省地图暨曾侯乙墓所在位置示意图 Hubei Provincial Map & The Location of the Tomb of Marquis Yi of Zeng

不停地排水，到5月22日上午，一个庞大的棺盖终于露出东室水面，显然这就是墓主人的大棺。大棺有内外两层。外棺是以青铜为框架嵌木板构成的，周身彩漆，十分华丽。棺底下有一批极为珍贵的黄金制品。

此外，东室还有八具随葬棺，人骨经鉴定为年龄在19－26岁之间的女性，她们应该是墓主人生前的妃妾或近侍宫女。

在主棺和陪葬棺之间的空间里，还出土了许多随葬品,主要有乐器、兵器、礼器、用器、车马器等。

到6月6日，墓主大棺周围的文物已经全部取出。墓主人究竟是谁，打开主棺也许就能真相大白。可人们没有想到的是，取吊大棺竟然困难重重。先尝试整体起吊，谁料两台吊车都吊不动，只得现场开棺，分层取吊。将棺盖撬开加固后，吊车将棺盖吊了起来，仪表显示载重已超过1.5吨。

外棺盖打开之后，五彩缤纷的内棺显露出来。内棺顶部有已腐烂的丝绸残迹。接着内棺盖被打开，南头棺壁上，一块半圆形玉嵌于中央。棺内有腐烂的丝麻织物，下有人骨架。可以窥见当年下葬时死者身穿多层锦衣，并用衾被包裹，小型金、玉、石、骨、角器布满死者周身。

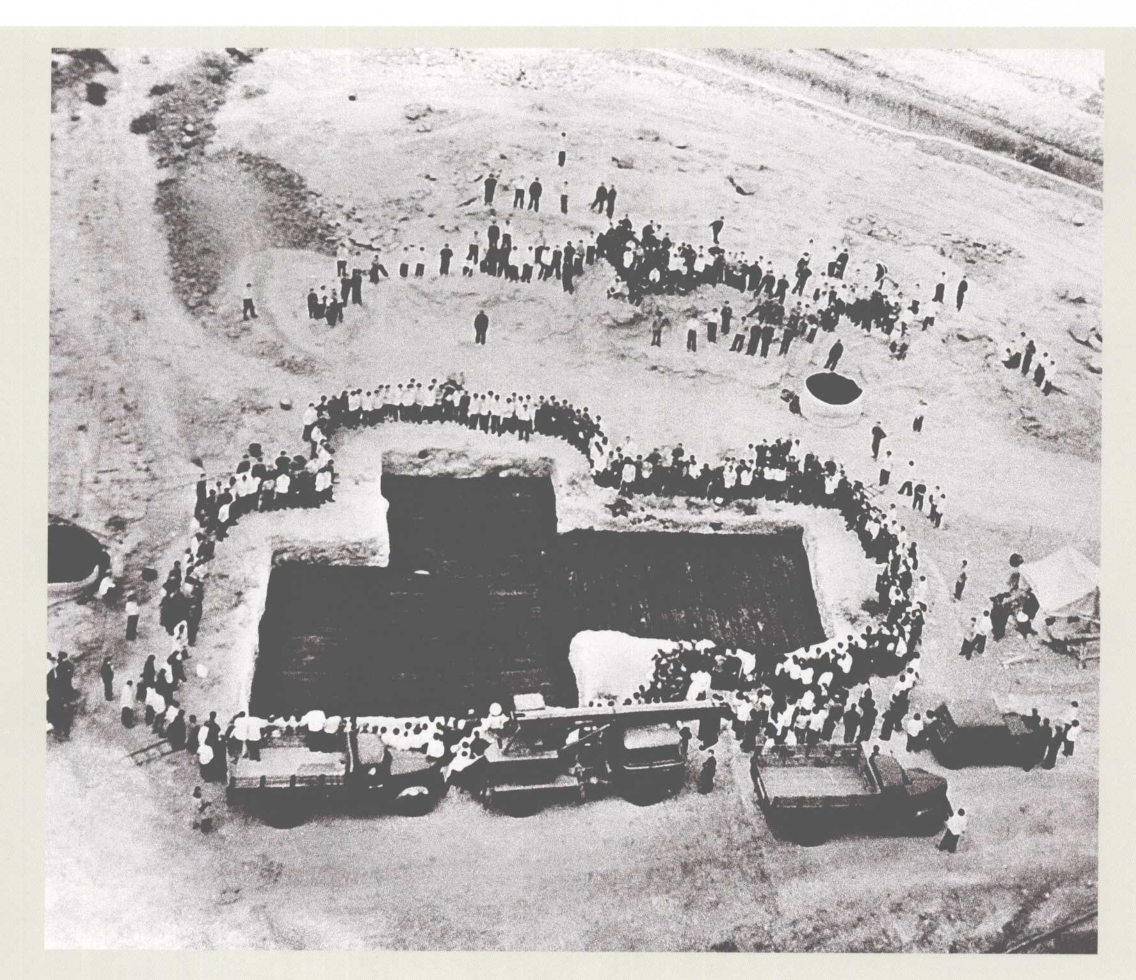
最后查明，外棺总重约7吨，内棺总重约2吨，难怪两台吊车都吊不动。除去木板含水重量，估计当年这副套棺总重当在6吨以上。经测算，光是外棺铜框架使用的铜量即在3000公斤左右。

内棺遗物经过四个昼夜的清理，呈现在人们面前。共清理出各类文物568件，其质地包括金、玉、铜、琉璃、水晶、骨、角等，种类繁多，制作精美。

其中玉器最为重要，可分为两类：一类是墓主人生前用品(佩饰、礼器、用器)，称佩玉；一类为专用于死后的埋葬器，称葬玉。葬玉因其形状及埋葬位置不同而名称不同：死者双手各握的一件圆柱形玉器，称玉握；嘴上盖着一件橄榄形玉器，像口罩似地捂住嘴巴，称为玉口塞；脸上及胸前散落着18件可以联缀的长方形或三角形的小玉片，覆盖脸面，称 “面幂”或“瞑目”；置于口中的各种小动物则称为玉琀。

5月22日午夜，随着水位的下降，中室隐约现出了三个木架。这是什么东西呢？到23日凌晨人们才发现原来是三组18件青铜纽钟，它们大小有序，悬挂依旧。木架上的横梁黑漆红彩。两端都有青铜套，套上满饰浅浮雕蟠龙纹。精美极了！

这三组钟是一架还是三架，这三个木架立于何处，下面还有没有钟？现在已出水的木架横梁才露出一米左右，其下还有两米多，必然有支撑物。否则编钟怎能挂得住？那下面还有什么呢？人们开始意识到一个重大的考古发现也许就在眼前。 24日午夜，水中露出了长短两根曲尺相交的第二层横梁，梁下悬甬钟33件。原来三架小钟是立于这两根横梁上的。25日午夜，又露出第三层横梁，12件大甬钟及1件镈钟或悬于梁下，或掉在梁旁，木梁两端皆有精美的青铜套。这是一个令我终身难忘的日子。全套青铜编钟，在沉睡地下2400多年之后，全部回到了人间！它规模宏大，气势磅礴，数量众多，





曾侯乙墓发掘现场和椁室全景
The site of excavation and the whole tomb

有谁见过这么多的编钟出于一个墓内？有谁见过这么雄伟的钟架屹立两千多年依旧巍然不倒？这不仅是中国考古史上，也是世界考古史上的一个重大发现。消息不胫而走，人们争相传告，整个工地，一片欢腾。

值得一提的是，整个中室仅东北角盗洞下方的文物较少，其余地方均未经扰动，证明盗墓者未进其室而仅在盗洞附近略加捞取，这要归功于墓室内的积水。

经过清理，一座辉煌的地下宴乐大厅始现出它的“庐山真面目”。

紧挨编钟的是32件石编磬和一座建鼓，后者是用以指挥的打击乐器，巍然屹立。先后清理出来的乐器还有：扁鼓、有柄鼓 、漆瑟、排箫、笙和篪。它们不正是一个击、弹、吹俱备，气势恢宏的大型乐队所用之乐器吗？与此同时，还有包括精美酒器、食具、浴具在内的大量青铜礼器、用器源源不断地从中室出水，品种之多，数量之巨，陈放之整齐有序，令人叹为观止！

6月17日，西室清理出了木棺十三具。尸骨经鉴定全为13-24岁的女性。这些少女是些什么人？与墓主人之间的关系是什么？是生前还是死后被埋葬的？令人疑窦丛生。前已说过，东室亦有八名或为妃妾或为近侍宫女的女子。其木棺制作比西室为好，随葬之物亦较西室为多。故西室这十三位女子很有可能就是君主宫中的乐舞奴婢。

到6月底，野外考古发掘工作已基本完成，我们还在北室发现了大量竹简和兵器，数量之多，

考古学家清理中室出土的乐器
Archaeologists unearthing musical instruments from the central chamber

令人瞠目。

经清理和清点，共出土文物一万多件。那么墓主人是谁，生活在什么年代，葬于何时等问题，随着发掘工作的深入进行，答案渐渐清晰起来。

根据编钟下层镈钟的铭文记载，此钟是楚惠王在五十六年(公元前433年)获悉“曾侯乙”死讯送给他的祭器。在墓内出土的众多青铜器上也多有“曾侯乙”铭文。此外，还在主棺旁发现了铸有“曾侯乙之寝戈”铭文的铜戈，墓葬的主棺就相当于生前的寝宫，此戈显然是墓主近卫武士使用之物。以上证据都证明了墓主人就是曾国名叫“乙”的国君。因此，墓葬时代的上限不会早于这一年，即距今已有2400多年。

Discovery of Tomb of Marquis Yi of Zeng

Tan Weisi



On the last night of February, 1978, when I was staying in Hubei Provincial Museum, I received a long-distance call from a museum in Xiangyang. I had been the head of an archaeological team for twenty years, and my experience told me that in winter, when farm and industrial infrastructures were built everywhere, important sites would be discovered and sometimes damaged. That was probably what a long-distance call from a museum in the dead of the night would be about. Sure enough, I was told that a large amount of brown earth was revealed by an explosion on a rocky hill when the troops stationed in Sui County were expanding a factory building. They suspected it might be an ancient tomb.

On March 19, I arrived at Sui County with some other archaeologists. We examined the site and decided it was indeed an ancient tomb. It measured 21.5 meters in maximum length from east to west, and 16.5 meters in maximum width from north to south. It was the largest tomb in a rocky pit ever discovered. There was a hole left by grave robbers at the center, and we wondered if it had already been plundered.

We started the excavation on May 11.

The tomb was divided into four chambers by twelve wooden walls, respectively the eastern, central, western and northern chamber. We lifted the boards and saw the whole tomb was submerged in water. On the next morning the lid of a huge coffin emerged in the east chamber. The coffin had two layers. The outer coffin, composed of wooden boards mounted on a bronze frame, was entirely coated in beautiful colored lacquer. Eight accompanying coffins were found in the eastern chamber. We examined the bones in them, and decided that they belonged to females aged between 19 and 26.

Four days later we saw the contents of the inner coffin: 568 relics of different kinds. They were exquisitely made of gold, jade, bronze, colored glaze, crystal, bones and horns. Most of them were made of jade, being either ornaments worn by the Marquis when he was alive or those buried with him.

At dawn on May 23, there emerged in the water eighteen bronze bells arranged in three groups and hung on a wooden frame. The frame looked very beautiful, painted with black and red lacquer, and decorated with bronze casings with interlaced hydras in shallow relief at both ends. On the midnight of May 24, there appeared the crossbeam of the second tier hung with thirty-three bells. On the midnight of May 25, the crossbeam of the third tier appeared, with exquisite bronze casings at both ends, and 13 bells hanging from it or lying beside it. By then all the set-bells, buried for 2,400 years, had been brought back into daylight. It was a major discovery not only for China but also for the world. All the people at the site cheered.

Next to the bells were a set of thirty-two stone *qing* and one *jiangu* drum. The drum, which stood erect and high, was used to conduct. Other musical

instruments unearthed were: flat drums, handled drums, lacquered *se*, panpipes, *sheng* and *chi*. All the instruments combined to form a large band, complete with percussion instruments, stringed instruments and wind instruments. We also discovered a large number of bronze ritual vessels, which were used to hold wine or food or for bathing. The relics were astonishing in number, types and orderliness of arrangement.

We discovered thirteen wooden coffins containing female bodies in the west chamber. Their age ranged from 19 to 26. They were probably musicians and dancers in the palace of the monarch.

The field excavation was largely finished towards the end of June. We discovered an astonishing number of bamboo slips and weapons in the northern chamber.

We counted over 10,000 unearthed relics. As the excavation went on, we came to know the identity of the principal occupant of the tomb, the time in which he lived and the time of his burial.

The inscriptions on one of the bells at the bottom tier say that it was presented to the main occupant of the tomb as a sacrificial vessel by King Hui of Chu in 433 BC. Besides, most of the bronze ware bear inscriptions containing the phrase *zenghouyi*, or Marquis Yi of Zeng. These indicate that the occupant was the monarch of Zeng, named Yi, and that time of burial was no earlier than 433 BC.

曾侯乙墓和曾侯乙编钟

王纪潮

1978年在湖北省随县(今随州市)擂鼓墩发现的曾侯乙墓和曾侯乙编钟，是20世纪中国最重要的考古发现之一，它不仅改变了人们对先秦时期中国南方文化的认识，而且改写了古代世界的音乐史。下面就从这两个方面略做论述。

中国考古史的空前发现

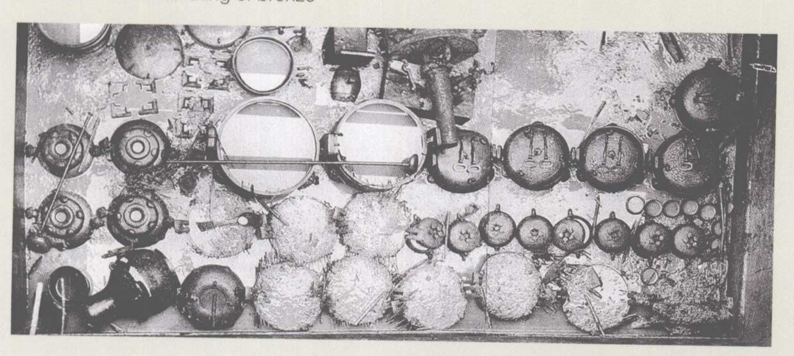
1.考古学上的重要收获

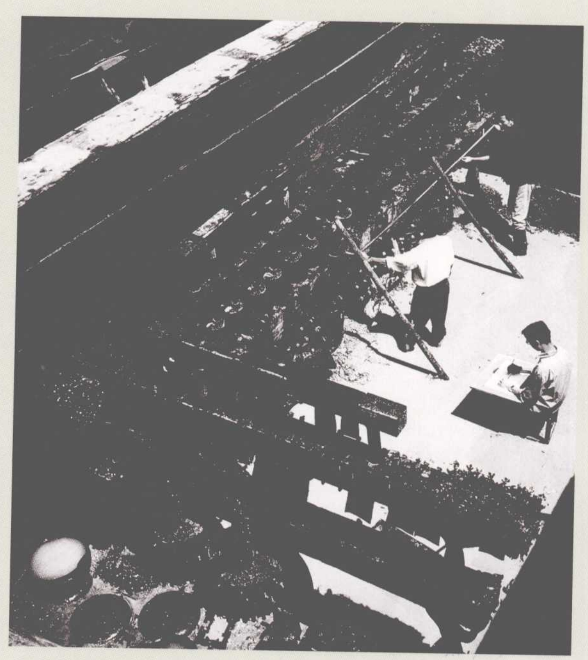
曾侯乙墓位于湖北省随州市西北郊擂鼓墩附近一座名叫东团坡的小山上。1977年9月，当地驻军在此扩建营房时发现该墓。1978年5月至6月进行了发掘，编号为擂鼓墩一号墓，因墓中出土青铜器铭文表明墓主为曾侯乙，后称曾侯乙墓。曾是国名，侯是墓主的爵位，乙是墓主的名字。

先秦时期的诸侯大墓完整保存下来的非常少见。曾侯乙墓因地下水位较高，除了在秦汉期间有一次未遂盗掘外，保存基本完好。经过整理，墓中共出土各类文物15000余件，在许多方面都创造了先秦墓葬出土文物之最。

墓中出土青铜器6239件，总重量约10.5吨。其中包括青铜礼器、用器三十八种134件和65件一套的曾侯乙编钟，是历年出土青铜器种类最全最多的一次。

青铜器出土现场
The site of the unearthing of bronze





曾侯乙编钟出土现场
The site of set-bells from the Tomb of Marquis Yi of Zeng

在周代礼乐制度中，鼎制（用鼎数量）和乐悬制度（钟磬布局）是显示身份等级的标志。曾侯乙墓发掘前未经扰动，各种礼乐器以九鼎八簋为中心，钟磬共列一室，完整地体现了当时诸侯享用器物的规制。曾侯乙墓共出土铜鼎22件，其中九件束腰平底鼎是礼制所规定的正鼎。过去一般认为，诸侯用九鼎是对礼制的破坏。从曾侯乙墓钟磬的悬制与鼎制的配合来看，这种观点需要修正。先秦时期对贵族悬挂钟磬的规定是：王四面悬挂（宫悬），诸侯三面悬挂（轩悬），卿大夫两面悬挂（判悬），士一面悬挂（特悬）。曾侯乙墓的编钟呈曲尺形靠椁室西面、南面悬挂，编磬靠北面悬挂，正好合于诸侯三面悬挂乐器的“轩悬”之制。故有学者指出，当时诸侯使用九鼎可能并非僭越周礼[1]。

墓中出土的漆木竹器（不计漆木乐器、兵器的杆、盾、漆甲胄等）共有230多件，也是先秦墓葬出土最多保存最好的一次。其中规模巨大、彩绘精美的墓主内棺和外棺，是迄今所见中国古代最大的漆器。

墓中出土的玉、石、水晶、紫晶、料器等535件，其中玉器320件，也是先秦墓葬一次出土玉器最多的一次。尤其一件长48厘米、用五块玉牌、三个玉环和一根玉销钉组成，可以活动卷折的十六节龙凤纹玉挂饰，用透雕、浮雕、阴刻等技法雕成三十七条龙、七只凤和十条蛇纹，构思巧妙，雕刻精湛，是中国先秦墓葬最为精美的一件玉器。

先秦墓葬中出土金器十分少见，曾侯乙墓却出土了五种金器，940件金箔，另有大量的贴金箔马饰和弹簧状金丝。其中一件饰有蟠螭纹、绹纹、雷纹、涡云纹的金盏，重达2156克，是已出土先秦金器中最重的一件。

曾侯乙墓文字资料极为丰富，墓中出土竹简240支，是中国目前所见最早的一批竹简，计6000多字。加上铜器、石器、木器铭文和漆书、墨书文字一共12696字，是自西晋发现汲冢竹书（279 年）以来，出土先秦文字资料最多的一次。它们提供了诸如考古、历史、音律、天文等多方面的珍贵资料，解决了大量的历史疑难。

2.历史学上的重要收获

先秦文献记载的曾国有两个：一为姒姓缯国，其地域在今河南方城一带，西周末年与申国、犬戎灭西周。二为姒姓鄫国，其地域在今山东枣庄东，公元前528年灭于鲁。今天随州一带只有姬姓随国，并无曾国。随国最后一次见于文献是在公元前494年。1933年在安徽寿县楚幽王墓中发现了“曾姬无卹壶”，首次确认有姬姓的曾国存在[2]， 但地望未详。

清代以来，在随州及附近的京山、襄阳、枣阳、京山、河南新野、桐柏等地先后发现了曾国铜器而并无随国铜器出土，因此这个曾国是否为随国一直是个谜团。

曾侯乙墓的发现为解决曾国之谜提供了线索。曾侯乙墓位于随州，表明其国都与随都重合；历史上随国与楚国关系密切，曾侯乙编钟里有楚惠王送的镈钟一件，宋代随州附近也出过两件同样铭文的曾侯钟，可知楚国所送当是一套编钟。为了悬挂楚王镈钟，曾侯乙编钟下葬时特意将原下层正中的甬钟移开，挤掉了最大的一件甬钟没有下葬。编钟为礼乐重器， 一国君主为他国君主铸造“宗彝”目前仅此一例，反映两国关系非同一般。1980年随州又出土两件有铭文的铜戈，表明曾国确为姬姓，这基本上就肯定了曾国就是历史上的随国，曾随是一国二名[3]。

3.科学技术上的新发现

曾侯乙墓出土的青铜器是公元前5世纪冶金铸造技术的一个高峰，设计精巧，纹饰华美，铸工考究，代表了当时范铸、焊接和熔模铸造等技术的最高成就。

青铜铸造是古代文明高度发达的体现，有浑铸、分范合铸和熔模铸造（失蜡法）三种方法。前两种技术在商代已经十分成熟，熔模铸造在中国何时出现，中外学者意见不一。在发现曾侯乙墓之前，出土的熔模铸造件不早于汉代。曾侯乙墓出土了一套精美异常的青铜尊盘，尊口沿和盘上的变形蟠虺纹镂孔附饰，由多层次的铜梗和花纹组成。在铜梗后面，发现有浇铸口和排气道的痕迹，这是熔模铸造的证据。1979年在中国铸造学会召开的传统精密



曾姬无卹壶
Pot of Concubine Wuxu of Zeng
战国晚期
通高78、口径20.8x18.8cm，重25kg
器口内五行三十九字铭文：“唯王廿又六年，圣桓之夫人曾姬无卹，望安兹漾陲蒿间之无匹，用作宗彝尊壶，后嗣用之，职在王室。”



曾仲斿父壶
Pot of Zhongyoufu of Zeng
战国晚期
高66.7、口径23.1、宽16.3cm，重30.1kg。
1966年京山苏家垅出土。器口有十二字铭文："曾斿仲父用吉金自作宝尊壶"。

铸造工艺鉴定会上，尊盘被确定为最早的熔模铸造件。同年河南淅川又发现春秋时期的类似工艺，这就把中国运用熔模铸造法的年代进一步确定在春秋时期。

编钟的铸造集中代表了先秦时期范铸技术的水平。编钟的几何形状、尺寸、合金比例和组织等都能够影响乐音质量，曾国工匠已能很好地处理这些技术问题。研究发现，编钟青铜配方的含锡量控制在14%左右，并有意识地加入少量的铅以增加声波传递的阻尼作用，加快钟声的衰减，以利于演奏；在范铸过程中，还采用了预热铸型和延期脱范等技术，使乐钟均匀退火，以利于后期调音的音频稳定[4]。

另外，曾侯乙墓的青铜装饰大量使用了"红铜纹饰铸镶法"新工艺。它是把事先铸就的红铜纹饰镶嵌在铸范上，浇铸时便与器皿浑为一体。这种技术要求较高的浇铸温度，在山西侯马春秋战国的冶铜遗址中曾有发现，但未引起注意。曾国这一技术的广泛运用，是冶铸技术进步的重要标志[5]。

曾侯乙墓的漆木器中有几件反映当时天文学知识的衣箱，有的绘有传统的后羿射日故事，有的绘有日月星辰的星图。其中一件箱盖正中朱书"斗"字，四周写有二十八星宿名称，东西两侧分别绘有苍龙白虎图像。中国二十八星宿起源何时何地，学者意见不一。此前一般认为不早于战国晚期，是从印度或巴比伦传入。衣箱上的苍龙白虎与环北斗的二十八星宿相配，说明这是中原地区独有的观象系统，而不是印度或巴比伦的黄道系统。

世界音乐史的辉煌成就

明曾侯乙墓共出土乐器九种125件(计编钟65件，编磬32件，瑟12件，鼓4件，笙6件，篪2件，箫2件，十弦琴1件，五弦均钟1件)。另有钟磬演奏工具12件，钟磬架及挂件、磬匣、鼓座、琴轸、瑟码等附件1714件，是历年出土乐器最多、种类较全、保存最好的一次，在音乐史的研究上具有划时代的意义。在这批乐器中发现了几种失传的先秦乐器，如十弦琴、均钟、篪等。建鼓和笙是目前所见最早的同类乐器。曾侯乙编磬则是所见先秦磬件数最多、悬挂编列方式最清楚的一具。煌煌巨制的曾侯乙编钟是音乐史上最重要的发现，它涉及了先秦时期中国的音乐、冶金铸造、物理声学等多方面的成就。

编钟共65件，分上、中、下三层八组悬挂。上层三组19件纽钟，中层三组33件甬钟，下层两组12件甬钟和1件镈钟。编钟最大的一件通高152.3厘米，重203.6公斤。最小的一件通高20.2厘米，仅重2.4公斤。全套编钟重2567公斤，加上钟架、青铜立柱和挂件等，共重4421公斤。

曾侯乙编钟的每件钟体和钟架横梁、悬钟挂件都有铭文，共3755字。曾侯乙编磬和磬架、磬匣也有铭文共812字。编钟铭文包括三方面的内容，一是铭记（如"曾侯乙乍时"），二是标音（如一甬钟不同的发音部位标有"羽反"、"宫反"字样，意为高音的"La"，高音的"do"），三是乐律关系（如纽钟标有"割肄（姑洗）之宫"、"黄钟之宫"等，意即 C 调的"do"，#G调的"do"）。反映了公元前5世纪的声学、律学和乐学方面的许多成就，改写了世界音乐史，下面简单予以介绍。

1. 声学

（1）证实先秦时期合瓦形钟能够发出双音。

1977年学者们就提出先秦编钟存在双音现象，却没有实证。曾侯乙编钟的正鼓和侧鼓部位均有标

音铭文，依铭文位置敲击，能发出两个呈三度关系的不同乐音。

（2）证实先秦存在绝对音高。

西方学者认为中国到战国晚期受西方影响后才有相对音高概念。曾侯乙编钟的最低音是C_2(下·1·1正鼓音)，最高音是D_7(上·1·1侧鼓音)，频率范围64.8-2329.1赫兹，跨五个八度加一个大二度，它以姑洗律为标准。例如，曾侯乙编钟中的中层三组八号钟与中层二组七号钟都是“姑洗之宫”，相当今天的C_4-35音分（即钢琴上的中央C音），其频率为256.4赫兹，与物理音高标准C_4=256赫兹相当接近，说明春秋战国之际，中国就有绝对音高和相对音高的概念[6]。

2. 律学

律学是声学的分支学科。西方学者过去认为中国音乐是单调音乐，其律学是从希腊或巴比伦传入。曾侯乙编钟铭文记载了二十八个律名，仅七个是已知的。铭文反映出先秦律学并非外来，至少在西周就已形成了十二律；曾律源于周律，列国都先后形成自己的乐律体系。但重要的发现有以下几点：

（1）曾律具有五度律和纯律的特点。

中国十二律的生律法有《管子·地员篇》和《吕氏春秋·音律篇》记载的两种方法，均是按照“三分损益法”以弦定律（即以特定弦长为宫音，减1／3后得出该弦音的上方五度音；再增加该弦的1／3，得出下方的四度音。依次交替使用，可生成十二律）。如《管子》的算法是：宫($1\times3^4=81$)→徵($81\times4/3=108$)→商($108\times2/3=72$)→羽($72\times4/3=96$)→角($96\times2/3=64$)。

曾侯乙钟十二律的宫、徵、商、羽四个基音是按照“三分损益法”（五度相生）产生，即宫音的上方五度生徵，徵下四度生商，商在上五度生羽。但其他各律是按“三度生律法”（纯律）[7]产生，即：以宫、商、徵、羽为基音，取基音上方的大三度音为“角音”，取其下方的大三度音为“曾音”。形成纯律大三度结构[8]。这种复合律制的发现主要解决了两个问题，一是证实文献没有明确记载的“三度生律法”在春秋时期已经出现。二是《管子》记载的生律方式可靠，它并非由希腊传入。

（2）先秦乐律以弦定律。

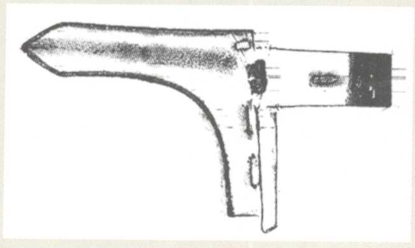
先秦乐律是以管定律还是以弦定律曾有分歧。曾律的形成方法为以弦定律找到了依据。另一重要的证据是墓中还发现了一件五弦定律器——“均（yūn）钟木”，它是一种弦线式的音高标准器。即通过均钟木上弦长的计算，来确定编钟的音高。

3. 乐学

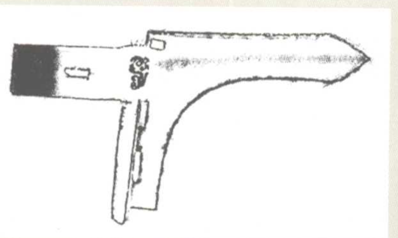
曾侯乙编钟的音乐成就体现在它的音乐性能和钟铭记录的乐律学论述上。铭文涉及到的音乐知识有音阶、调式、律名、阶名、变化音名、旋宫法、固定名标音体系、音域术语、八度组、音程变化等方面，绝大多数是过去不知道的先秦乐理知识，其中重要的问题有以下三个方面：

周王孙季怡戈
Dagger-ax belonging to Jiyi, descendant of the king of Zhou
春秋
通长18.5、援长11.8cm。
1979年随州市季氏梁1号墓出土。内尾两面均有铭文："周王孙季怡孔臧元武元用戈。"此墓同出另一件铜戈铭为："穆侯之子西宫之孙曾大工尹季怡之用。"可知曾国的大工尹"季怡"是曾穆侯之子，西宫之孙，又为"周王孙"。此器证明曾国确为与姬周的同姓国，是解决曾、随关系的重要证据。













（1）编钟具备十二半音和旋宫转调功能。

十二半音在中国传统音乐术语中称为“十二律”，它是将一个八度分为十二个不完全相等的半音的一种律制。西方学者曾认为周代这十二个半音每个虽可作主音，但无音阶功能[9]。曾侯乙编钟的中心音域十二半音齐备，即：宫(do)、羽角(♯do)、商(re)、徵曾(♭mi)、宫角(mi)、徵曾(fa)、商角(♯fa)、徵(sol)、宫徵(♭la)、羽(1a)、商曾(♭si)、徵角(si)。在实际演奏中，这十二半音确有音阶功用，编钟能够演奏五声、六声、七声音阶的乐曲，能够旋宫转调。

（2）先秦存在多种音阶结构。

曾国以宫、商、角、徵、羽五声音阶为主，但已出现了七声音阶。编钟铭文中有大量的曾国阶名与列国阶名的对应关系。例如，中·3·10钟的正鼓音为“徵”，其铭文是：“姑洗之徵，大族之羽，新钟之变商，迟则之羽曾，曾钟之徵角”。意即：“C调的sol是♯A调的la，也是楚国新钟律(♯F调)的升do，中国迟则律(D调)的升mi，楚国曾钟（♯G调)的Si”。在下·2·1钟铭上有“变宫”，下·2·3钟铭上有“变徵”两个阶名。它们证实了先秦时期存在多种音阶结构。

（3）先秦已有八度音和音域的概念。

不区分八度组的，会给记谱、作曲、唱、奏带来诸多不便。曾侯乙编钟音域达五个半八度，它用两种方法区别八度音，如在徵、羽、宫、商、角五音的前后加缀字“大”、“少”、“反”等，如“少商”为商音的高八度，“宫反”为宫音的高八度，这就说明先秦已有八度组概念。

曾侯乙墓和曾侯乙编钟发现之前，人们对中国先秦时期的南方文明的认识有局限性。曾侯乙墓发现之后，曾一度被认为是所谓“楚文化”的一部分，通过对礼制、音乐、文字、器物风格、人种鉴定等多方面的综合研究，认为它的主体仍是中原文化，其文化特色是南北文化融合发展的结果。这一结论不仅厘清了先秦时期长江中游文化的源流，而且揭示了文化发展过程中多元因素的积极作用。

曾侯乙墓和曾侯乙编钟在中国乃至世界都是绝无仅有的重要发现。它不仅反映出公元前5世纪中国的科技和音乐成就居于世界领先地位，还展现了在人类文明出现“文化突破”的公元前5世纪，人类理性所能达到的高度。所谓“文化突破”就是从公元前5世纪起，在世界范围内宗教权威都受到了质疑。此前，世界各主要文明都在宗教威权的统治下，一切思想、制度、技术和文化（包括音乐）都在宗教的形式下得到表现，科技和音乐只是神秘主义的体现和阐释。中国先秦时期的礼乐制度具有其他文明中的宗教功能，公元前5世纪发生的“礼崩乐坏”就是人类理性的进步引起的“文化的突破”，它带来了制度和技术的变化，而技术的发展又使制造的礼器摆脱了传统礼乐中“巫”的影响，消解了“礼乐”的仪式意义。在曾侯乙墓中，这种“文化突破”则表现为在技术和音乐层面追求技术炫耀和感官刺激，装饰过度的青铜尊盘和包含多元音乐因素、可演奏复杂旋律的青铜编钟都是典型的例子。在制作这些宗庙礼乐器时，“文化突破”和技术发展在相互起作用。表面上看，礼器（包括样式、装饰母题、陈列布局）没有大的变化，但其内涵已非崇拜神灵和祖先的传统仪式所能容纳，展现的却是人类理性和技术的进步。因此从这一点上看，曾侯乙墓的青铜礼乐器是先秦时期礼乐文明的高峰，也是礼乐制度的盛极而衰的转折点。

注释

[1] 李学勤：《东周与秦汉文明》第207页，文物出版社，1984年。

[2] 刘节：《古史考存》第124页，人民出版社，1958年。

[3] 李学勤：《曾国之谜》，《光明日报》1978年10月4日。

[4] 华觉明等：《先秦编钟设计制作的探讨》，《自然科学史研》1983年，2卷第1期。

[5] 贾云福等：《曾侯乙青铜器红铜纹饰铸镶法的研究》，《科学史文集》（金属史专辑），上海科学出版社，1985年。

[6] 黄翔鹏：《先秦音乐文化的光辉创造》，《文物》1979年第7期。

[7] 纯律是用纯五度（弦长之比为2：3）和大三度（弦长之比为4：5）确定音阶中各音高度的一种律制。

[8] 戴念祖：《中国物理学大系——声学史》第217－222页，湖南教育出版社，2001年。

[9] Joseph Needham and Robinson, Science and Civilization in China, Vol4, p.170, Cambridge. University Press.

Tomb of Marquis Yi of Zeng and Two-tone Set-bells in the Tomb

Wang Jichao

The tomb of Marquis Yi of Zeng and the two-tone set-bells in it, were discovered at Leigudun, Sui County (present-day Suizhou City) in Hubei in 1978. As one of the most important archaeological discoveries in China in the 20th century, it not only changed our view of the pre-Qin culture in south China, but also modified the history of ancient music.

I. An unprecedented archaeological discovery in China

1. Important archaeological findings

The tomb of Marquis Yi of Zeng lies in Suizhou, Hubei. It was excavated from May to June in 1978. Zeng was the name of a state, Marquis was a rank of nobility, and Yi was the name of the main occupant. Over 15,000 relics of various kinds were unearthed, ranking first among all relics unearthed from pre-Qin tombs in several ways.

6,239 bronze articles were unearthed, with the gross weight of about 10.5 tons. They include 134 pieces of bronze ritual vessels and articles for daily use that fall into 38 categories and 65 set-bells. They surpassed all previously unearthed bronze ware in variety.

The tomb had never been disturbed before the archaeological excavation. The arrangement of ritual vessels and musical instruments, with nine *ding* (cooking vessel) and eight *gui* (food container) at the center, set-bells and *qing* (stone chimes) in the same chamber, is a true reflection of the funeral of a feudal prince. The set-bells and *qing* are hung on three walls, as befitted his status. The use of nine *ding* might be in conformity with the rules on rites in the Zhou Dynasty.

More than 230 wooden lacquered articles, 535 jade, stone, crystal, amethyst and glass ware were unearthed, among which 320 jade articles mark the largest number of Eastern-Zhou lacquered articles and jade ware by far. Also unearthed were five types of golden ware; one of them, a golden cup weighing 2,156 grams, is the heaviest pre-Qin gold ware ever unearthed.

2. New technological findings

The openwork interlaced hydras that decorate the mouth of a bronze *zun* (wine vessel) and the matching *pan* (water container), composed of multi-layered bronze stalks and patterns, were made by using lost wax casting.

The set-bells mark the pre-Qin achievements in casting. The geometric shape and size of the bells and the ratio and combination of alloy components, all of which could affect the tone, were well controlled by craftsmen in the Zeng State.

One of the wooden lacquered articles, a suitcase, bears a red character *dou* (signifying the Big Dipper) at the center of its lid, which is surrounded by the names of 28 constellations, and flanked by the images of a dragon and a tiger. Previously there had been controversy as to the time and place of the origin of the traditional Chinese system of 28 constellations, but most scholars had surmised that it was brought to China from India or Babylon no earlier than the late

Warring States Period. The positions of the dragon and tiger images and the 28 constellations on the suitcase show that the system was unique to the Central Region of China.

II. Musical achievements

125 musical instruments were unearthed at the tomb, falling into eight categories. They surpass all previously unearthed instruments in number and state of preservation. There are 65 set-bells, arranged in 3 tiers and 8 groups, weighing up to 2,567 kg.

There are 3,755 characters inscribed on the bells, indicating events, tones and temperament. They reflect achievements in acoustics, temperament and musicology in the 5th Century BC.



1. Acoustics

(1) They prove that pre-Qin bells with curved surfaces are able to produce two tones each.

There are pitch-indicating inscriptions on the front and sides of each bell. Hit the bell at the indicated places and it will produce two distinct tones, with an interval of a third.

(2) They prove the existence of absolute pitches in the pre-Qin period.

In the middle tier, bell No. 8 in the third group and bell No. 7 in the second group are both able to produce the *gong* note of the key of *guxi*, which corresponds to C4-35, i.e. middle C on the piano, with a frequency of 256.4 Hz, very close to the frequency of C4, which is 256 Hz. That proves the existence of the concepts of absolute pitches and relative pitches in the Spring and Autumn Period and the Warring States Period.

2. Temperament

The inscriptions on the bells contain the names of 28 notes and keys, and indicate that the twelve pitches had formed no later than the Western Zhou Dynasty. The following are the major findings.

(1) The temperament used in Zeng combines the method the fifth and the just intonation

Of the 12 pitches, 4 notes—*gong*, *zhi*, *shang* and *yu*—are produced by the method *sanfen sunyilivi*, while the rest are produced by using just intonation. For instance, a major third produced by just intonation above *gong*, *shang*, *zhi* or *yu* is a *jue*, while a major third produced by just intonation below either of them is a *zeng*.

(2) Pre-Qin instruments might be pitched by strings.

There was some controversy as to whether pre-Qin instruments were pitched by strings or pipes. That the temperament method used in Zeng combines the method *sanfen sunyilivi* and the just intonation bears evidence that pitching was done with strings. Also discovered in the tomb was a pitching instrument with five strings.

3. Musicology

The set-bells reflect musical achievements in three aspects.

(1) The bells are capable of producing twelve semitones and change of keys. They have a complete set of twelve semitones in the central register—*gong* (do), *yujue* (#do), *shang* (re), *zhizeng* (bm), *gongjue* (mi), *zhizeng* (fa), *shangjue* (#fa), *zhi* (sol), *gongzhi* (bla), *yu* (la), *shangzeng* (bsi) and *zhijue* (si). They can be used be play music based on the pentatonic scale, six-tone scale or seven-tone scale.

(2) There existed several types of scales in the pre-Qin period. In the Zeng State the pentatonic scale (*gong*, *shang*, *jue*, *zhi* and *yu*) was mainly used, but the seven-tone scale had already been invented.

(3) There existed concepts of octave and range in the pre-Qin period. The set-bells in the tomb have a range of five and half octaves. Octaves are indicated with the characters *da*, *shao* or *fan*. For instance, *shaoshang* is an octave above *shang* and *gongfan* is a an octave above *gong*.

The tomb of Marquis Yi of Zeng and the set-bells in it were a unique discovery in China as well as in the world. It indicates the superior position China enjoyed in technology and music in the 5th century BC. The bronze ritual vessels and musical instruments in the tomb marked the summit of the pre-Qin rites-and-music culture, as well as the point of its turning to decline.

墓主与年代

墓内出土的器物许多带有铭文。其中标明器物为曾侯乙制作与使用的铭文有208处，如"曾侯乙乍（作）(峙)"，"曾侯乙之用戟"等。特别是一件刻有"曾侯乙之寝戈"铭文的短柲戈，当为曾侯乙寝宫侍卫使用之物。这些表明墓主人应为曾侯乙。

在中室出土的镈（bó）钟上刻有铭文："隹（唯）王五十又六祀，返自西旟（阳），楚王酓（熊）章乍（作）曾侯乙宗彝，寘之于西旟（阳），其永（峙）用享"。它记载了楚惠王熊章赠送鎛钟给曾侯乙作为宗庙祭器一事。楚惠王五十六年即公元前433年，即曾侯乙墓下葬年代的上限。

此外，从墓葬的形制、出土文物特征和放射性碳素测定的数据综合分析，该墓的下葬年代为距今2400年左右的战国早期。墓主人是曾国一位名叫"乙"的国君，即曾侯乙。



The Identity of the Main Occupant and the Time of His Burial

Many of the articles unearthed bear inscriptions, 208 of which indicate their being made for or used by Marquis Yi of Zeng. For instance, a short-handled dagger-ax bears inscriptions that indicate its being used by guards of the marquis' sleeping quarters. These bear proof that the main occupant of the tomb is Marquis Yi of Zeng.

The inscription on a large bell unearthed at the central chamber says that it was presented to the marquis by King Hui (Xiongzhang) of Chu as a sacrificial vessel to be used in the ancestral temple in 433 BC. That was the earliest possible time when the marquis was buried.

Judging from the size and shape of the tomb, features of relics unearthed and the carbon dating data, the burial took place in the early Warring States Period about 2,400 years ago. The main occupant is Marquis Yi, the monarch of Zeng.

主棺内棺

The inner coffin of the principal coffin

高132、长249、宽127cm

主棺出土于东室，分内棺和外棺。外棺以工字、厂字和T字形青铜为梁，铜柱和圆形铜础为框架，重3200多公斤。内棺出土时置于外棺内，用巨板榫接而成。周身髹漆并饰以龙蛇纹735条，各种动物纹142只，神人神兽武士纹20个。





纹饰局部

Detail of the pattern



起吊主棺棺盖

Hoisting the lid

内棺侧面 The side of the inner coffin



内棺刚出土时情况
Design on the side of the inner coffin



内棺棺面
Surface of the inner coffin



内棺挡板纹饰
Design of the baffle of the inner coffin

“楚王熊章”铜镈钟

The bell presented by King Xiongzhang of Chu

楚王熊章镈钟，出自中室编钟的下层中间，钲部刻有31字铭文：“隹（唯）王五十又六祀，返自西鴋（阳），楚王酓（熊）章乍（作）曾侯乙宗彝，寞之于西鴋（阳），其永時用享”。“楚王熊章”即楚惠王；“王五十又六祀”即楚惠王五十六年，也就是公元前433年。

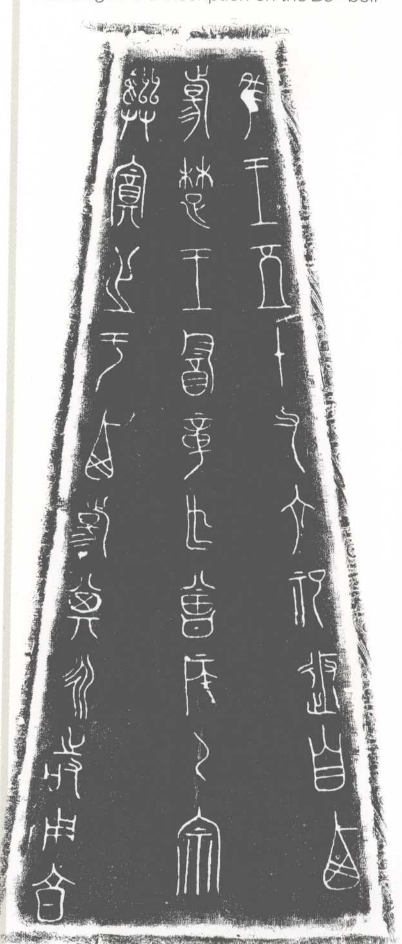


铸钟顶部
Top of the *Bo*-bell

铸钟纹饰局部
Design of the *Bo*-bell



镈钟铭文拓片
Rubbing of the inscription on the *Bo*-bell







铜“曾侯乙之寝戈”

The dagger-ax used by guards of the sleeping quarters

通长14.3cm

立鹤顶部 Head of the standing crane



立鹤尾部 Tail of the standing crane



铜鹿角立鹤

Bronze crane with antlers

通高143.5cm，重38.4kg

想象的吉祥动物。全器造型别致，由鹤身、鹤腿、鹿角、底板四部分榫接组成，鹤的头、颈与鹿角均错金装饰，背脊与双翅周边镶嵌绿松石（已佚），喙部右侧有“曾侯乙作持用终”七字铭文。

中国古代视鹤、鹿为神鸟、瑞兽。此为鹿、鹤合体，出土时置于主棺之东，是一种沟通人、鬼、神的灵媒。

礼器



中国青铜文化的灿烂与我国先秦礼制密切相关，青铜重器的制作与使用是礼仪活动的需要。周代的礼制极为繁复和严格，祭祀活动的重要和频繁主导着青铜礼器的制作，随着生产力的发展和技术水平的提高，青铜器的数量和质量在春秋战国之际达到了前所未有的高度。

曾侯乙墓出土青铜礼器（不含乐器）和用器共三十八种134件，是历年来我国出土青铜器数量最多、种类较全的一次。它们绝大多数出自中室，因发掘前未经扰动，多保持下葬时的布局，真实地反映了墓主人享用器物的规制，这在考古发掘中极为罕见。

曾侯乙墓的青铜礼器组合大体上沿袭春秋时期的传统："鼎成序、簋成套、鬲成组、豆成对，盘、匜相配"。

曾侯乙墓青铜器具有造型奇特、工艺精湛、纹饰华美的特点，采用了浑铸、分铸、熔模铸造等冶铸技术和平雕、浮雕、圆雕、透雕、错金、镶嵌、铸镶、铜焊、镴(là)焊、铆接等多种工艺，集先秦青铜制造技术之大成，集中反映了我国当时先进的冶铸科学水平。

Bronze Ritual Vessels

The brilliance of the Chinese bronze culture was closely linked to pre-Qin rites system, because rites and ceremonies necessitated the making and use of important bronze ware. The Zhou Dynasty had a complicated and rigorous system of rites. As a result, the importance and frequency of sacrifices called for the making of many bronze ritual vessels. Thanks to technological advances, bronze ware reached an unprecedented level in number and quality in the Spring and Autumn Period and the Warring States Period.

134 bronze ritual vessels, which fall into 38 categories, were unearthed at Marquis Yi's tomb, ranking first in number and high in variety among similar finds in China. The vast majority of them were found in the central chamber. As they had never been disturbed before the excavation, they were arranged in the same way as when they were buried, showing a true picture of main occupant's funeral. Such good preservation is very rare in archeological excavations.

The arrangement of the ritual vessels basically conforms to the tradition in the Spring and Autumn Period, with *ding* arranged in proper order, *gui* in a set, *li* in a group, *dou* in pairs, and *pan* matched with the ladle.

The bronze vessels are characterized by special designs, exquisite techniques and splendid patterns. They are a comprehensive reflection of technical achievements in bronze-making in the pre-Qin period, featuring a variety of casting, carving, welding and decorating techniques.



铜镬鼎

Bronze cauldron

通高57、口径57.4cm，重41kg
匕长158.5cm

镬鼎是古代贵族在祭祀、宴飨等重大礼仪活动中煮牲肉的鼎。出土时鼎腹底有烟炱痕迹，鼎钩挂于鼎耳，配有长柄匕。鼎内与鼎钩均有“曾侯乙作畤用终”七字铭文。

九鼎八簋

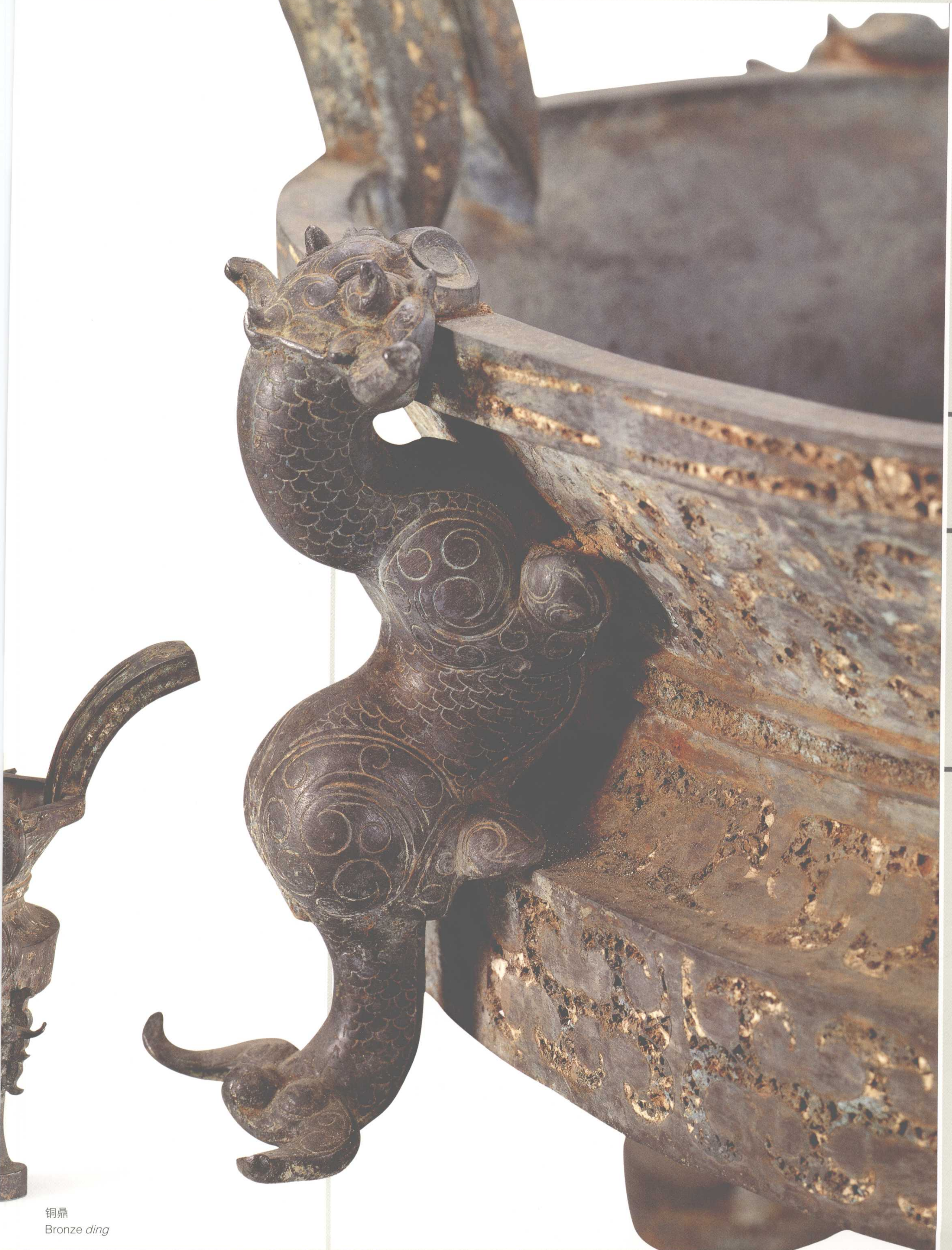
Nine *ding* and eight *gui*

鼎高35—36cm，重19.7—20.7kg
簋高30.8—32.3cm，重11.4—13kg

在祭祀礼仪中，鼎供奉牲肉，簋供奉食粮，是最重要的祭器。在众多的鼎中，正鼎（文献也称“升鼎”）与簋的组合件数代表用鼎者的身份，即鼎制。曾侯乙墓出土九件铜升鼎和八件铜簋。它们和悬制（即陈设钟、磬的规定）构成了礼乐制度的基础。

铜簋
Bronze *gui*





铜鼎
Bronze *ding*



牛形纽
Ox-shaped handle

牛形纽铜盖鼎

Ding covered with a lid with ox-shaped handles

通高40.4cm　重28.6kg

食器。盖上有三个造型生动逼真的牛形纽铜饰。鼎外壁原用绿松石镶嵌有精美纹饰，出土时绿松石已佚。



小铜鼎（附铜匕）

Small *ding* with a bronze ladle

通高20.6—21.4cm，重1—1.5kg

盛食器，主要用于调味。出土时匕置于鼎内。



铜盖豆

Dou with a bronze lid

通高26.4cm，重5.9kg

食器。在祭祀与宴飨中，专门盛放腌菜、肉酱等调味品。有“曾侯乙作峙用终”七字铭文。



铜炉盘

Bronze stove and tray

通高21.2cm，上盘口径39.2cm，重8.4kg

食器。用于取暖和煎烤食物。出土时炉内存有木炭，盘内存有鲫鱼鱼骨。盘底有烟炱痕迹，是目前发现最早的煎烤食物的青铜炊具。

铜炭盆、箕和漏铲

Bronze brazier, dustpan and sifting shovel

炭盆通高14、口径43.8cm，重16.2kg
箕长29、口宽25.3cm，重1.6kg
漏铲通长38.6、口宽14.7cm，重1.6kg

箕和漏铲出土时置于炭盆内。盆用以烧炭，箕盛木炭或炭灰，漏铲则用来筛炭（底有菱形漏眼53个）。盆上铸镶红铜纹饰，铜箕仿竹箕制作，器表及曲栏均模仿竹篾编织的形状。盆底、箕口沿、漏铲柄上均有“曾侯乙作峙用终”七字铭文。



铜鉴缶（附铜过滤器）

Bronze *jian* and *fou* with a bronze filter

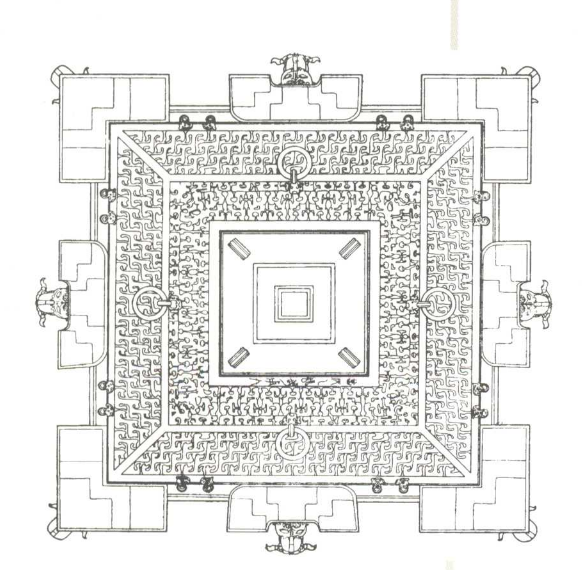
通高 63.2、边长 62.8—63.4cm，重 170kg
过滤器通高88.5cm，重4.6kg

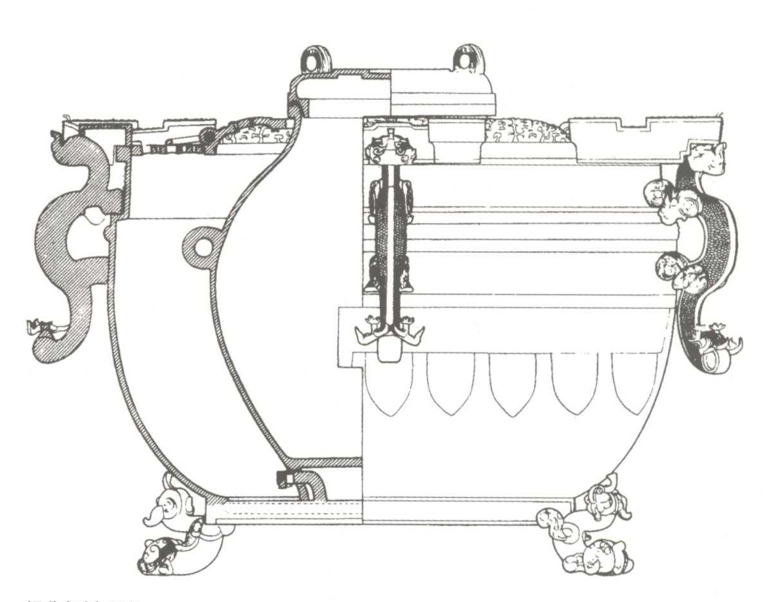
由方鉴、方缶组合而成，缶置于鉴内。鉴直口，方唇，短颈，深腹，四个兽足承托鉴底。鉴身四角及四边中部榫接八个方形或曲尺形附饰和八个龙形耳。鉴盖中部留有方孔套合方缶口部。鉴盖浮雕变形蟠螭纹，鉴体浮雕蟠螭纹，下腹饰蕉叶纹。方缶小口，方唇，斜肩，鼓腹，平底。缶上饰勾连纹、菱形带纹、蕉叶纹等。放置时，方鉴底部有三个弯钩套合缶底的方孔，其中一个有活动倒栓，插入自动落下，固定方缶。鉴缶均有“曾侯乙作時用终”铭文。使用时，方缶盛酒，鉴缶之间的空隙盛冰。《周礼·天官·凌人》有“大丧共夷盘冰”、“祭祀共冰鉴”的记载，尊盘、鉴缶亦可称“冰盘”、“冰鉴”。





铜鉴缶组件
Components of bronze *jian* and *fou*


铜鉴缶顶面示意图
Apical view of bronze *jian*


铜鉴缶剖面图
Section plan of bronze *jian*

铜尊盘

Bronze *zun* (wine vessel) and a *pan* (tray)

尊通高30.1cm，重9kg

盘通高23.5cm，重19.2kg

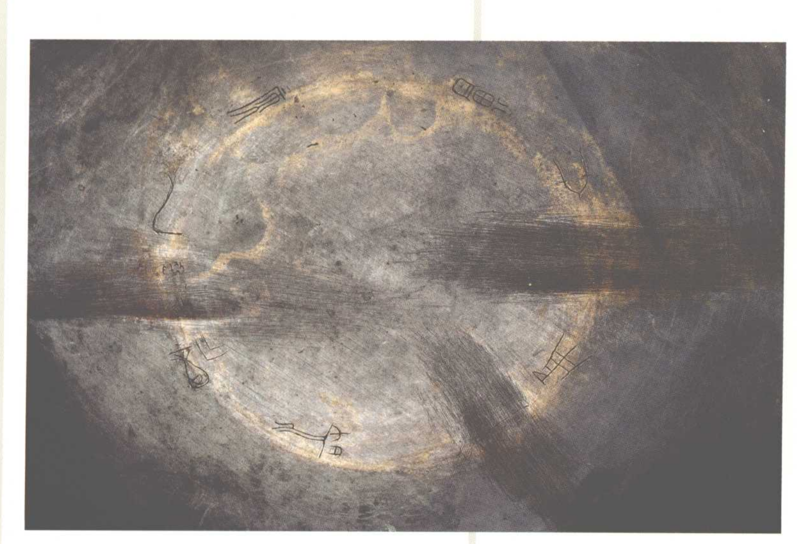
出土时尊置于盘中。尊是盛酒器，盘则一般作水器用，二者合为一器。此器原为曾侯乙的先君所用，曾侯乙继而用之。尊与盘内都有“曾侯乙作峙用终”七字铭文。

曾侯乙墓出土的青铜器是中国青铜时代巅峰期的作品，曾侯乙青铜尊盘造型美观，铸造工艺精湛，堪称其中的典范。尊盘共饰龙纹84条（尊28、盘56），蟠螭纹80条(尊32、盘48)。尤其重要的是，尊盘口沿上的透空蟠螭纹装饰是用失蜡法铸造而成，它分为高低两层，内外两圈。每圈有16个花纹单位，每个花纹单位由形态不一的四对变形蟠螭组成。表层纹饰互不关联，彼此独立，全靠内层铜梗支撑构成一个整体，达到了玲珑剔透的艺术效果。

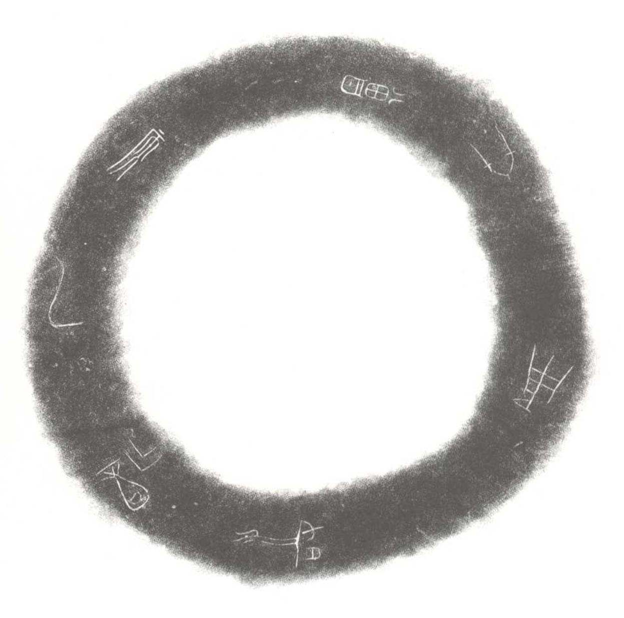




铜盘
Bronze *pan*



铜盘铭文磨擦痕迹
Inscription on the bronze *pan*



铜盘铭文拓片
Rubbing of inscription on the bronze *pan*







铜尊缶铭文

Inscription on the bronze *zunfou*



铜尊缶

Bronze *zunfou* (wine vessel)

通高126、最大腹径100cm、重327.5kg

盛酒器。用于祭祀、宴飨等仪式活动。形体庞大，是目前所出土的古代最大的青铜酒器。肩部有“曾侯乙作時用终”七字铭文。



铜联禁对壶

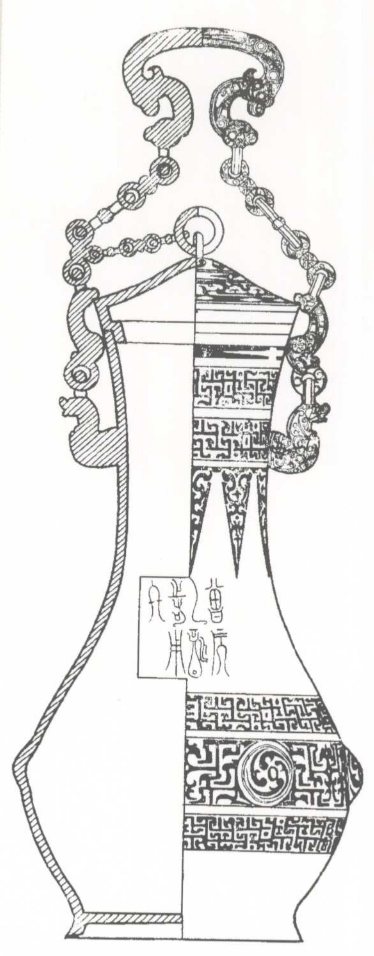
Bronze pots on a single stand

壶高99cm，两壶分别重99和106kg
禁高13.2、长117.5、宽53.4cm，重35.2kg

盛酒器。在祭祀、宴飨等重大礼仪活动中用于贮酒。







铜提链壶剖面图
Section plan of bronze pots with chain handles

铜提链壶

Bronze pots with chain handles

通高40.5cm，重5.6kg

酒器。有“曾侯乙作時用终”七字铭文。

沃盥之礼

Vessels for Washing Hands or Taking Baths

先秦贵族在祭祀、宴飨时要行沃盥之礼，盛水青铜器因此也是重要的礼器，器类主要有盘、匜（yí）、盂、鉴、缶、瓿（bù）、盆、斗等。最常见的是盘和匜，匜用以浇水，盘盛弃水。西周中期，盘也与盉配合使用。鉴有盛水、贮水照容和盛冰多种用途。盥缶则盛沃盥之水，河南淅川下寺楚墓及安徽寿县蔡昭侯墓所出同形器分别自铭为“浴缶”和“盥缶”。

曾侯乙墓共出土四件盥缶，大小轻重略同，但器表纹饰有别。两件镶嵌绿松石（多已脱落），两件以铸镶法形成红铜纹样。铸镶法是将预先制作的红铜纹饰放置范内，然后再浇铸青铜溶液，形成类似镶嵌的装饰效果。

In the pre-Qin period, nobles were required to wash hands or take baths before sacrifices or banquets, so bronze water containers, such as *pan* (plates), *yi* (ladles), *yu* (basins) and dippers, were also important ritual vessels. The most commonly used were *pan* and *yi*, the latter for pouring water and the former for holding waste water. In the middle of the Western Zhou Dynasty, the *pan* was also used together with the *he* (bronze vessel with deep belly and three feet). The *jian* was used as a water container or a mirror, or used to hold ice. The *fou* was used to hold water for washing. Similar vessels unearthed at Chu Tomb in Henan and Caizhaohou Tomb in Anhui bear inscriptions that indicate their uses-bathing or washing hands.

Four *fou* for washing hands were unearthed at Marquis Yi's tomb, which are similar to each other in size and weight, but different in surface decorations. Two of them bear inlaid turquoises, most of which are lost, while the other two are adorned with copper patterns using the 'cast inlay' technique. The technique worked like this: pre-fabricated copper decorations were placed in a mold, and then molten bronze was poured over it to produce a graceful effect.





铜熏

Bronze incense burner

高42.8cm，重2kg

用具。用于燃熏香料、香草以散发香味，其器形在考古发现中是第一次出现。





铜提链鉴

Bronze round *jian* with chain handles

通高29、口径44.6cm，重23.8kg

水器。盛水供沐浴或照容。有“曾侯乙作時用终”七字铭文。

镂空龙纹铜镇

Bronze weight with openwork dragon patterns

直径11.8、高8cm，重1.25kg

用具。共出土4件。战国时代人们席地而坐，铜镇是压席角之物。





铜匜鼎

Large bronze *yiding*

通高40、口径50.2×44.4cm，重13.2kg

水器。为匜、鼎的合体，此类器过去未见。



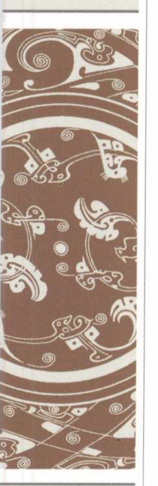
铸镶红铜纹饰盥缶

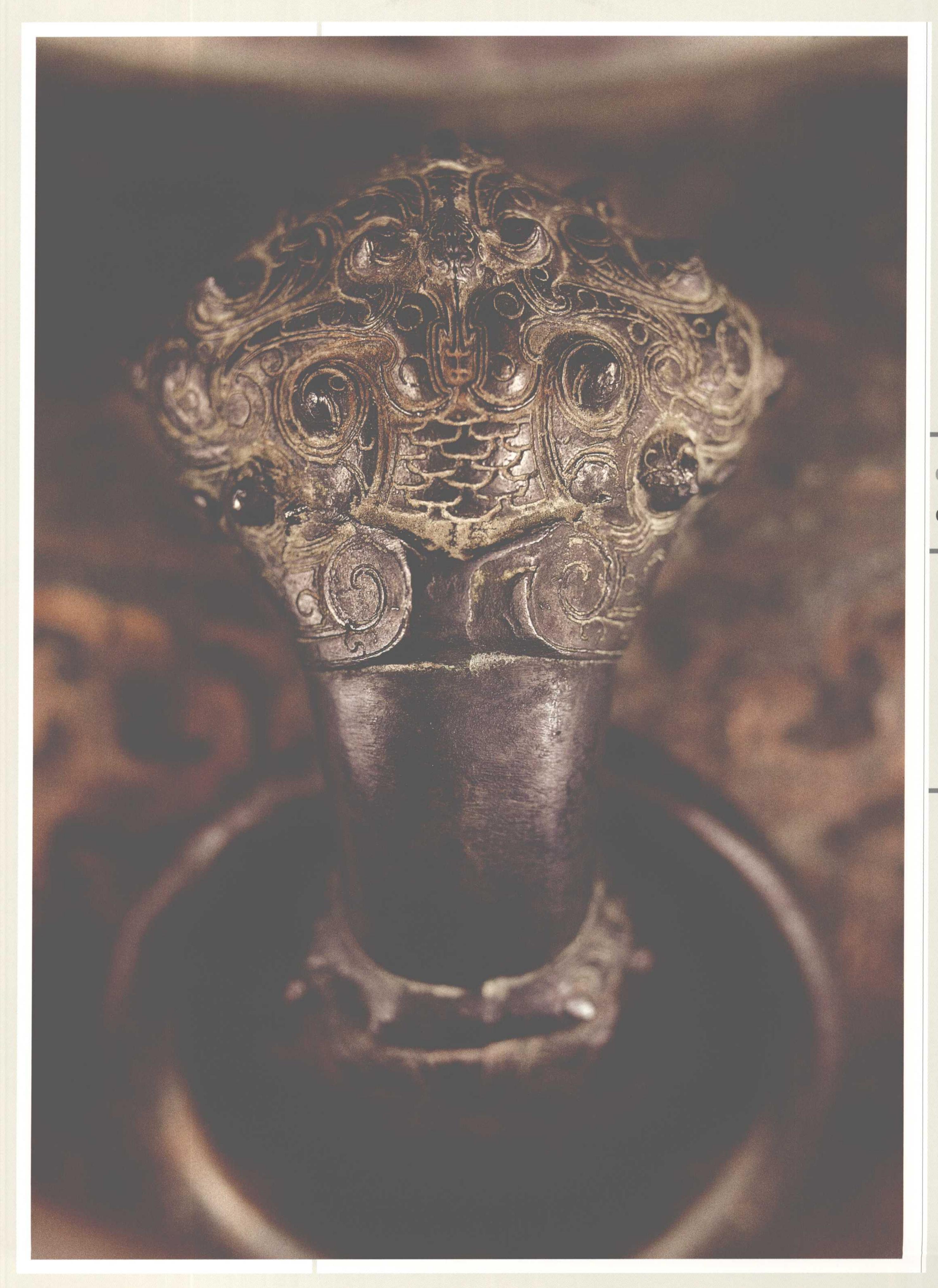
Jar for washing hands with cast-inlaid copper patterns

高36、腹径43.8cm，重33.7kg

水器。盥洗用的储水器。







乐器

曾侯乙墓出土了编钟、编磬、鼓、琴、瑟、笙、篪、排箫八种共125件乐器，以及相配的演奏工具及各种附件千余件。种类之全，数量之多，制作之精，保存之完好，为世界考古史上所仅见。其中不少乐器是新发现。公元前5世纪的礼制时代，乐器设置和表演形式须遵守贵族的等级制度。曾侯乙编钟沿中室南壁和西壁、编磬沿北壁呈三面悬挂，合于诸侯“乐悬”制度的“轩悬”之制。



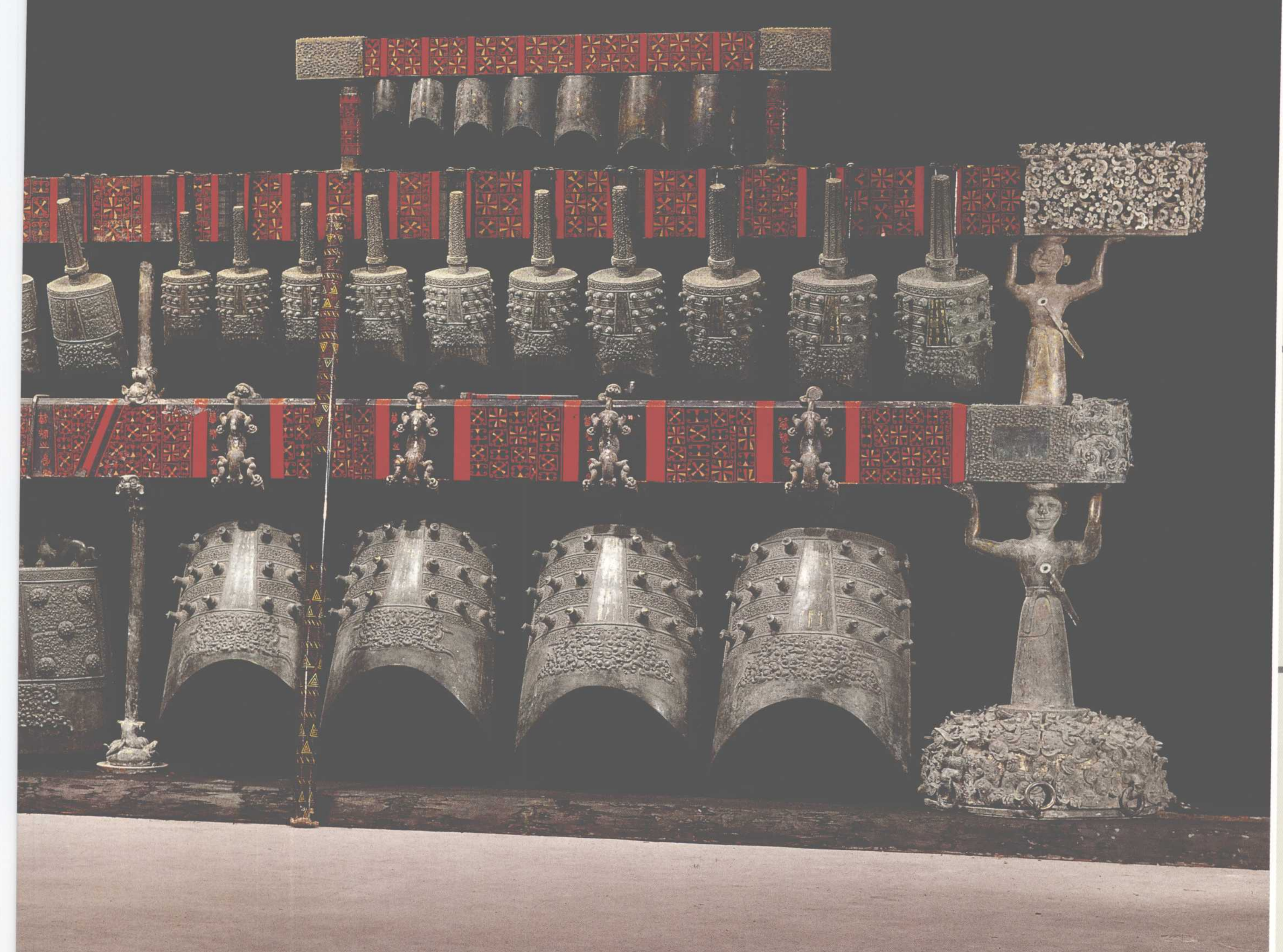
Musical Instruments

125 pieces of musical instruments, which fall into eight categories—set-bells, *bianqing* (stone chimes), drums, *qin*, *se*, *sheng*, *chi* and panpipes—were unearthed, together with more than a thousand playing tools and accessories. Their variety, number, fine workmanship and good preservation, with many new kinds never discovered before, qualify them as a unique archeological find in the world. In the 5th century BC, there were strict rank-based rules on the arrangement of musical instruments and the way of playing them. In Marquis Yi's tomb, the set-bells are hung on the southern and western walls, while the *bianqing* is hung on the northern wall, as befitted the rank of a feudal prince.



曾侯乙甬钟与纽钟
The *niu*-bell and *yong*-bell of Marquis Yi of Zeng





曾侯乙编钟

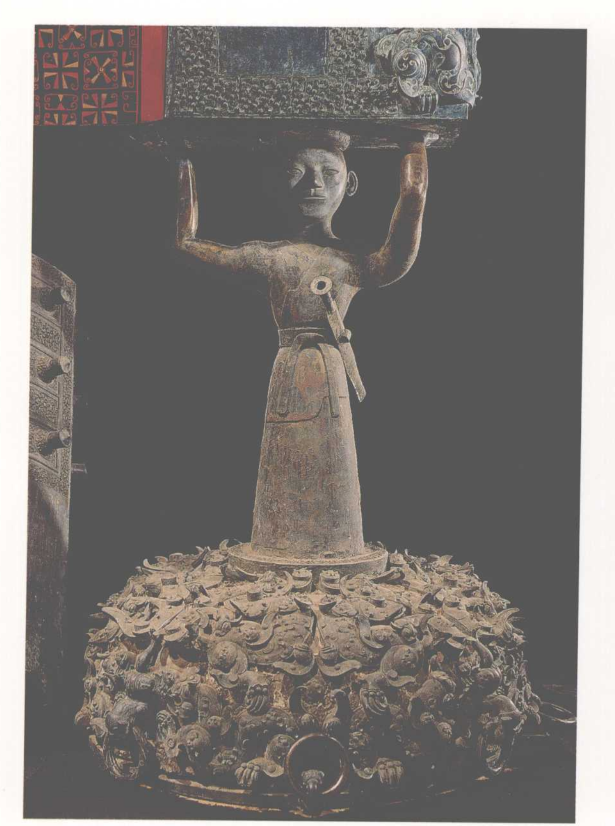
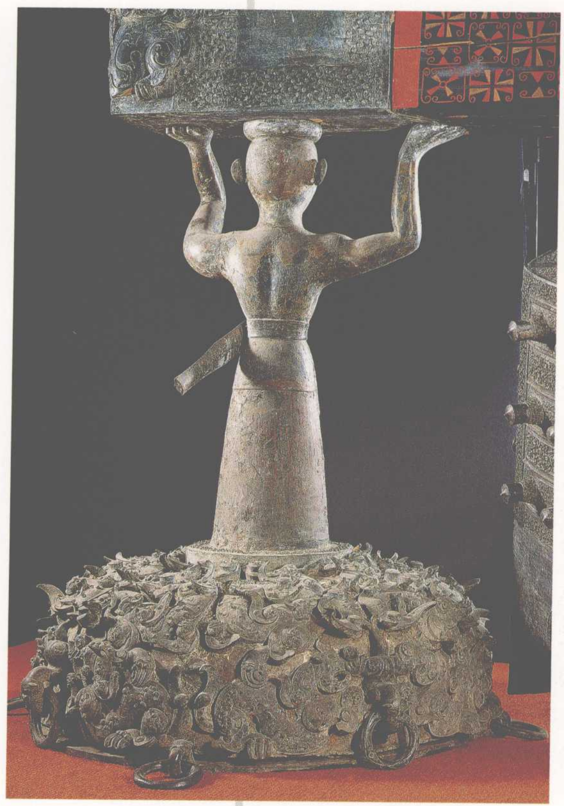
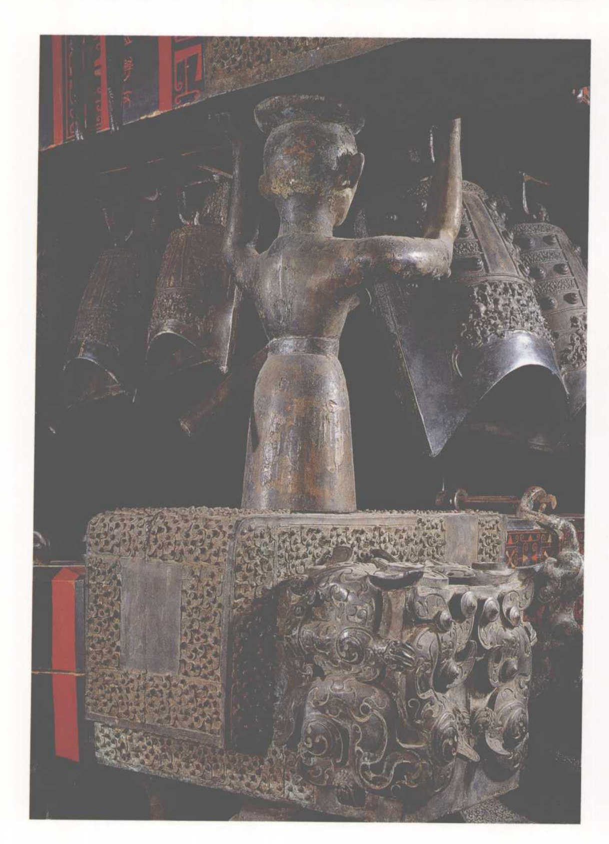
Two-tone set-bells of Marquis Yi of Zeng

长钟架长748、高265cm
短钟架长335、高273cm
最大钟通高152.3cm，重203.6kg
最小钟通高20.4，重2.4cm，总重约5000kg

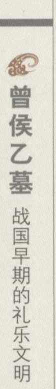
全套编钟由不同批次的多组编钟组成，共65件，分三层八组悬挂在呈曲尺形的铜、木结构钟架上。编钟用浑铸、分铸法铸成，并采用了铜焊、铸镶、错金等工艺技术以及圆雕、浮雕、阴刻、髹漆彩绘等装饰技法。

每件钟均具备"一钟双音"的特征。全套编钟音域跨五个半八度，十二律齐备、可以旋宫转调。

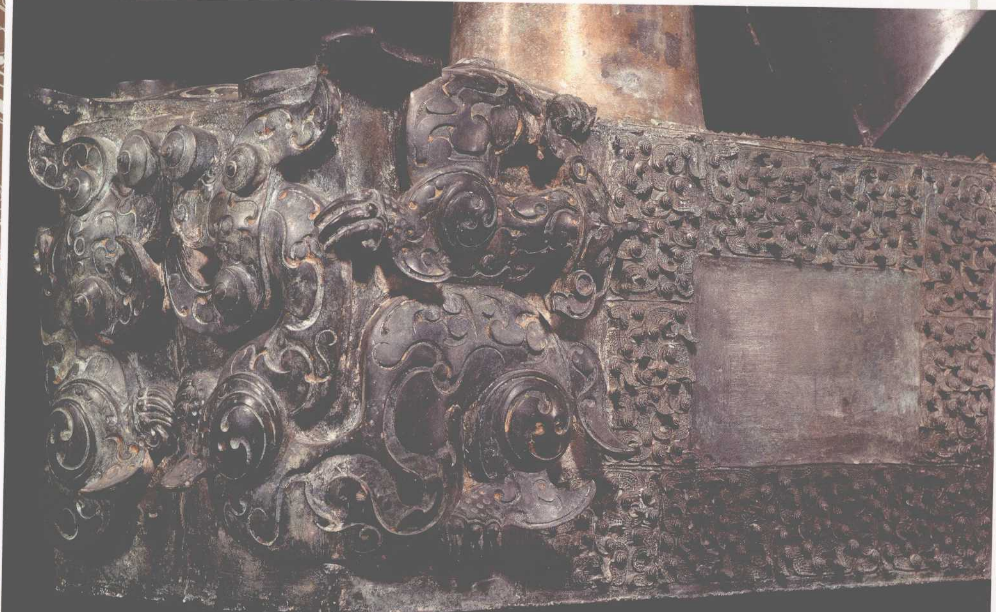
钟及钟架、挂钩上共有3755字的铭文，内容为编号、记事、标音以及记录诸如音名、阶名、八度组、各国律名对应关系等方面的乐律理论。其中甬钟的乐学标音体系以姑洗均为纲。姑洗是曾国律名。经测试，姑洗律高相当于C，黄钟律高相当于$_{b}$A。

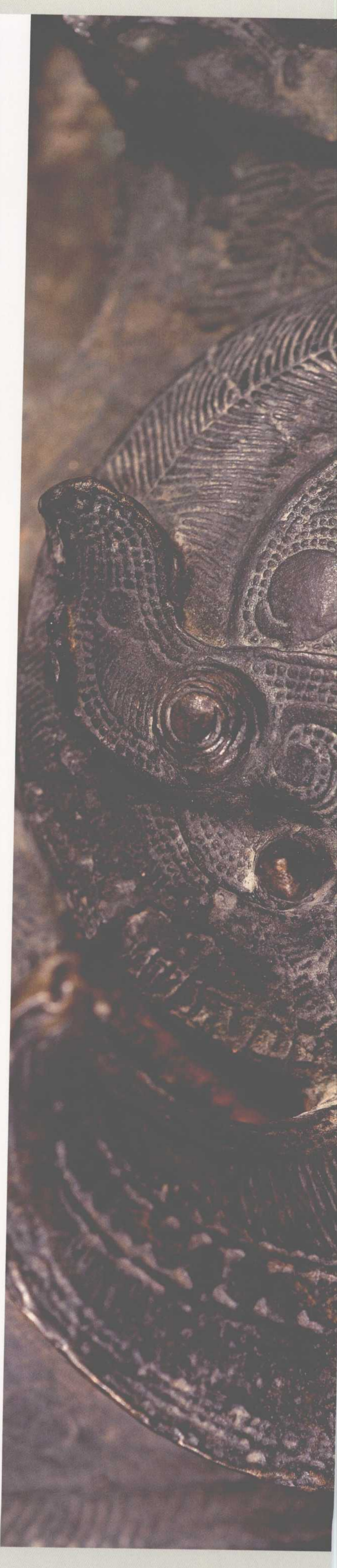





曾侯乙编钟人形支架
Human-shaped stand for the set-bells of Marquis Yi of Zeng







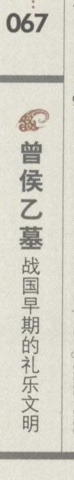
曾侯乙编钟梁架局部
Part of the rack for the set-bells of Marquis Yi of Zeng



编钟挂件
Bronze ornament
通长37cm



纽钟
Niu bell
通高33.3cm





曾侯乙编钟音位示意图
Tones produced by set-bells of Marquis Yi of Zeng

中层一组 MIDDLE GROUP 1

中层二组 MIDDLE GROUP 2

中层三组 MIDDLE GROUP 3

下层二组 BOTTOM GROUP 2

下层一组 BOTTOM GROUP 1

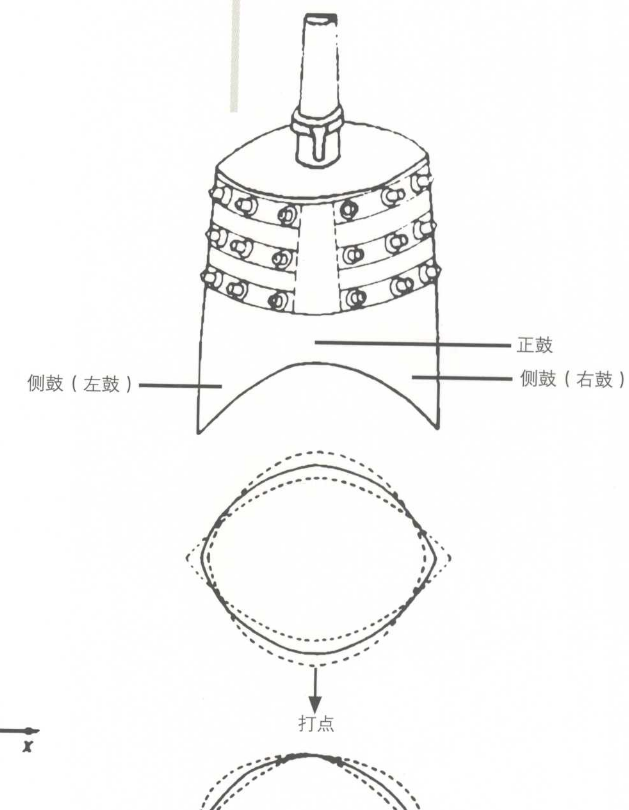
甬钟音名与现代音名对照
A COMPARISON OF NOTE NAMES BETWEEN THE YONG-BELLS AND MODERN PITCHES

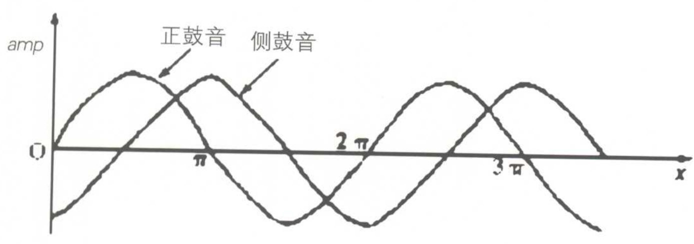
图例：
出土号
正鼓音 Zheng-gu Note
侧鼓音 Ce-gu Note

一钟双音
One bell, two tones

中国先秦钟的外形特征是合瓦形，敲击它的鼓部正面和侧面可以各发出一个音，这种现象就叫“一钟双音”。它是中国古代的伟大发明。

Pre-Qin bells are shaped like two joined tiles. It will produce two distinct tones by striking its front and sides, a characteristic known as one bell, two tones .





编钟双音原理示意图
The production of two tones on one bell

十二律

Twelve pitches

十二律是一种划分八度的方法，将八度划分为十二个单位，这些单位在律学（用数学、物理学研究音高的学科）里叫“律”，在音乐实践中叫“音”。形象地讲，钢琴上一个八度包括七个白键音和五个黑键音，这就是十二律在钢琴上的反映。曾侯乙编钟也有与之对应的十二个音。

律　位 Pitch placement	1	2	3	4	5	6
钢琴音名 Name of notes on the piano	C	#C	D	Be	E	F
曾钟音名 Name of notes on the set–bells	宫 Gong	羽角 Yujue	商 Shang	徵曾 Zhizeng	角 Jue	羽曾 Yuzeng
曾国律名 Name of pitches used in the Zeng state	姑洗 Guxi		妥宾 Tuobin		韦音 Weiyin	

律　位 Pitch placement	7	8	9	10	11	12
钢琴音名 Name of notes on the piano	#F	G	Ba	A	Bb	B
曾钟音名 Name of notes on the set–bells	商角 Shangjue	徵 Zhi	宫曾 Gongzeng	羽 Yu	商曾 Shangzeng	徵角 Zhijue
曾国律名 Name of pitches used in the Zeng state	无铎 Wuduo		黄钟 Huangzhong		大族 Dazu	浊姑洗 Zhuoguxi

现代钢琴上的十二个半音（即相邻两音的音高差距）是相等的，这种情况在律学里叫“十二平均律”。而曾侯乙编钟的十二个半音是不相等的。

完整的十二律名最早出现在战国早期的《国语・周语》中，曾侯乙编钟证实了十二律在当时已经被运用于音乐实践。其初创应始于西周或更早。

不同的民族和地区划分八度的方法并不相同，如泰国和缅甸把八度划分出七个音，泰国是平均划分，而缅甸是不平均划分。伊朗有二十二、二十四两种划分。阿拉伯则有十二律、十七律和二十四律等多种律制并存。

律制是音乐的根本属性，它决定音乐的地域特色和民族性格。



曾侯乙编磬

Bianqing (stone chimes) of Marquis Yi of Zeng

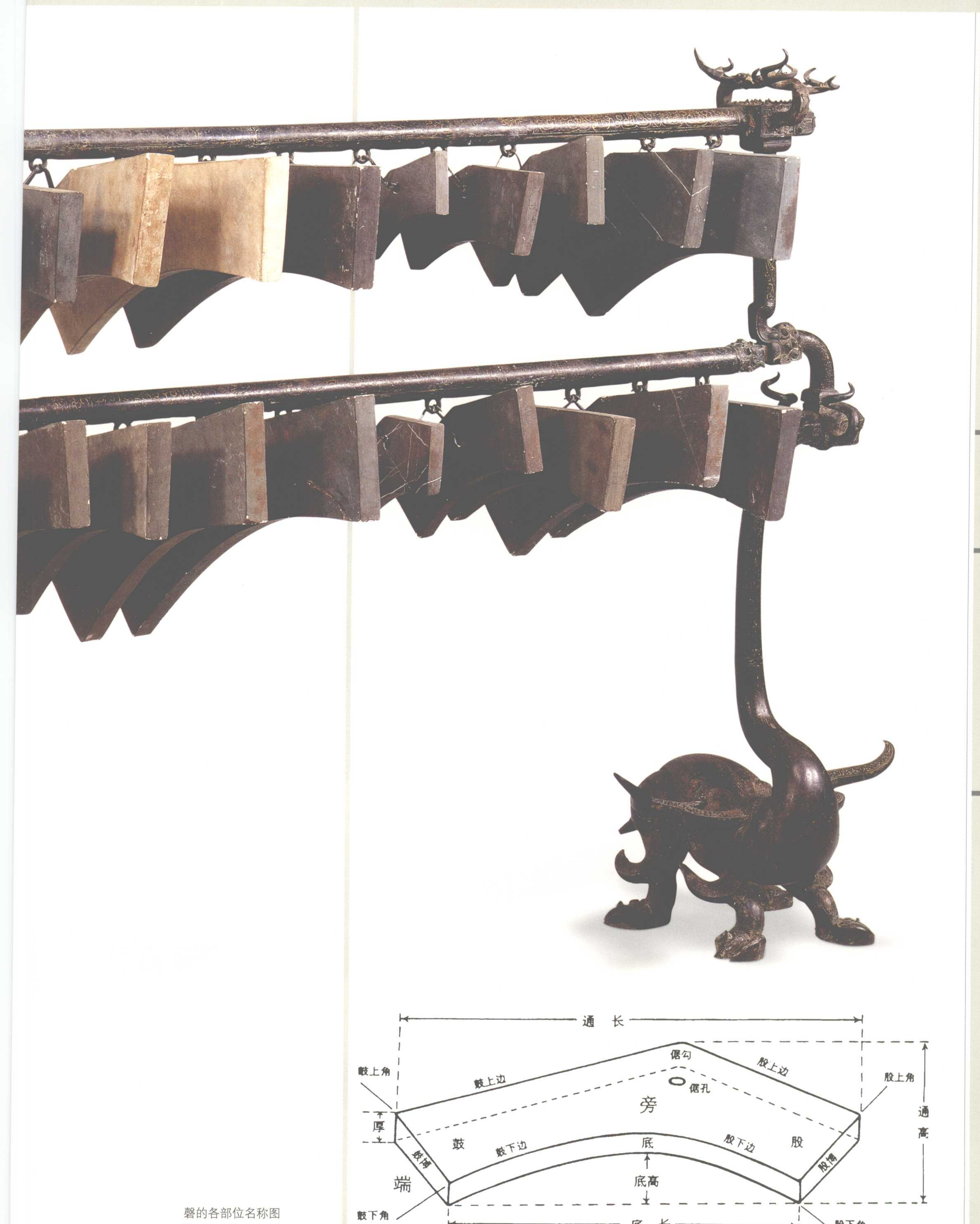
磬架高109、长215cm

打击乐器。磬架由青铜制的龙首鹤身怪兽等构成。横梁与立柱错金装饰；兽舌上有“曾侯乙作旹用终”七字铭文。

出土时，磬块多数已断裂侵蚀。复原研究显示，磬块由石灰石或大理石磨制，共32具，分上下二组悬挂于横梁之上，音色清脆明亮。这套编磬音域跨三个八度，十二律齐备、可以旋宫转调。

多数磬块刻有编号和乐律的铭文，其中一些铭文与编钟铭文相同。其乐学标音体系以浊姑洗均为纲（do=B），编钟铭文表明浊姑洗是曾国律名。

磬在中国夏代已出现，与仪式有着密切关系，因而编磬也是重要的礼器。编磬常与编钟合奏，称为“金石之声”。



磬的各部位名称图

Names of parts of the *qing*

铜建鼓座

Jiangu drum

贯柱通高365、鼓身长106、面径74cm
铜鼓座通高54、底径80cm，重192.1kg

打击乐器。建鼓因鼓之贯柱而得名。建鼓过去仅见于战国和汉代的青铜纹饰和石刻画像，此件是最早的实物。出土时鼓皮已朽，仅存鼓腔、贯柱及鼓座。曾侯乙建鼓青铜鼓座的铸造采用了分铸、铸接和焊接相结合的方法，由八对大龙和数十条纠结穿绕的小龙构成，龙身镶嵌绿松石，是迄今所见最精美的一件先秦建鼓座。

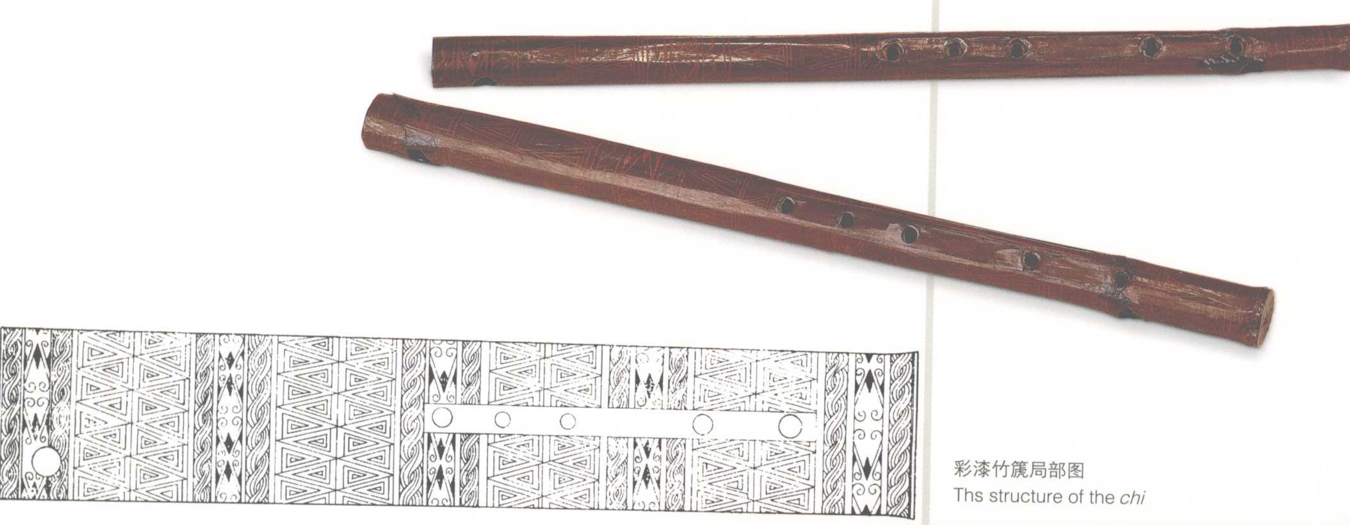


彩漆竹篪

Bamboo *chi* coated in colored lacquer

通长29.3—30.2cm

吹奏乐器。篪由竹管制成，与笛不同的是：它两端封闭，管身的吹孔、出音孔与五个指孔呈九十度，演奏时，掌心向里。是目前所见最早的篪。



彩漆竹篪局部图
Ths structure of the *chi*



彩漆排箫

Panpipes coated in colored lacquer

通长约22.5、宽约11.7cm

吹奏乐器。均由十三根长短参差的竹制箫管经三个竹夹缠缚而成。其中一件出土时有八个箫管仍能吹奏出超过五声的乐音。排箫又称“参差”或“箫”。孔子所欣赏的韶乐，因主要由排箫演奏而被称为“箫韶”。



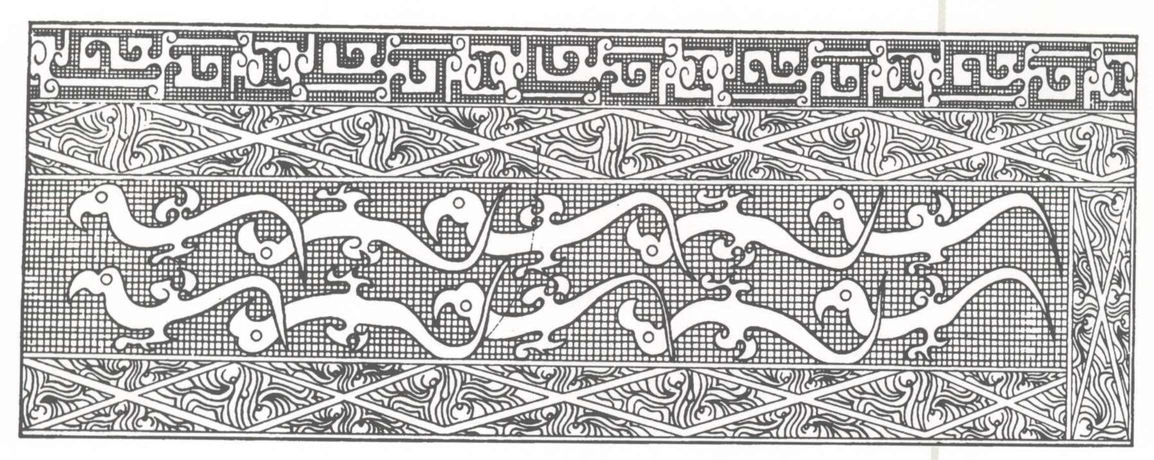
彩漆笙笙斗

Sheng coated in colored lacquer

笙斗通长20.8cm

中国古代乐器按质地分为金、石、土、木、竹、匏、丝、革八类，称为“八音”。笙属匏（即葫芦）类乐器。制作时按需在幼匏上套范定型。此笙是目前所见中国匏制笙中最早的实物。中国古笙在17世纪传入西方，衍生出簧风琴、手风琴、口琴等簧片乐器。





彩漆瑟彩绘展开图
Colored patterns on the *se*

彩漆瑟局部 Part of the lacquered *se*

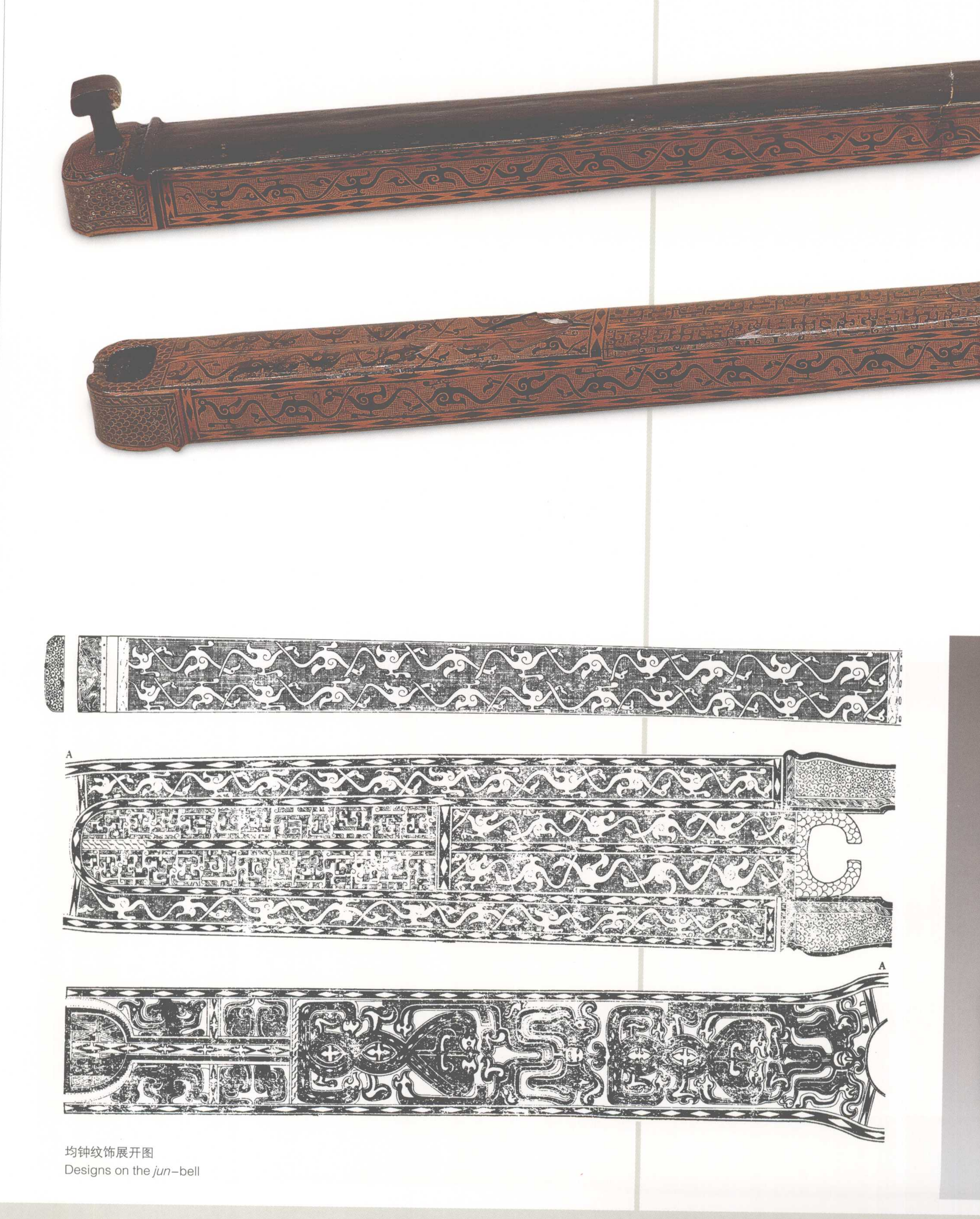


彩漆瑟

Se coated in colored lacquer

通长167.3、宽38.5—42.2cm

弹奏乐器。相传伏羲作五十弦瑟，黄帝改良为二十五弦。瑟琴常并称，”以喻和谐美好。目前考古发掘所见有十八、十九、二十一、二十二、二十三、二十四、二十五弦共六种弦制。曾侯乙墓出土瑟共12件，有5件出自东室。据弦孔原张施二十五弦，出土时弦已朽佚。



均钟纹饰展开图
Designs on the *jun*-bell



彩漆均钟

Junzhong (Pitching instrument) in colored lacquer

通长115、宽5.5—7cm

调律器。整木雕制，器身中空为音箱，据两端弦孔，原张施五弦，出土时弦已朽佚。器身绘有神人跨龙飞天和十二凤鸟图案。传说夏后启上天得乐和黄帝命伶伦仿凤鸟定十二律，1993年出土的《归藏》竹简有“夏后启，卜，乘飞龙以登于天”的记载。器身的图案可能是“夏启得乐图”和“伶伦作乐图”，内容与制律有关。

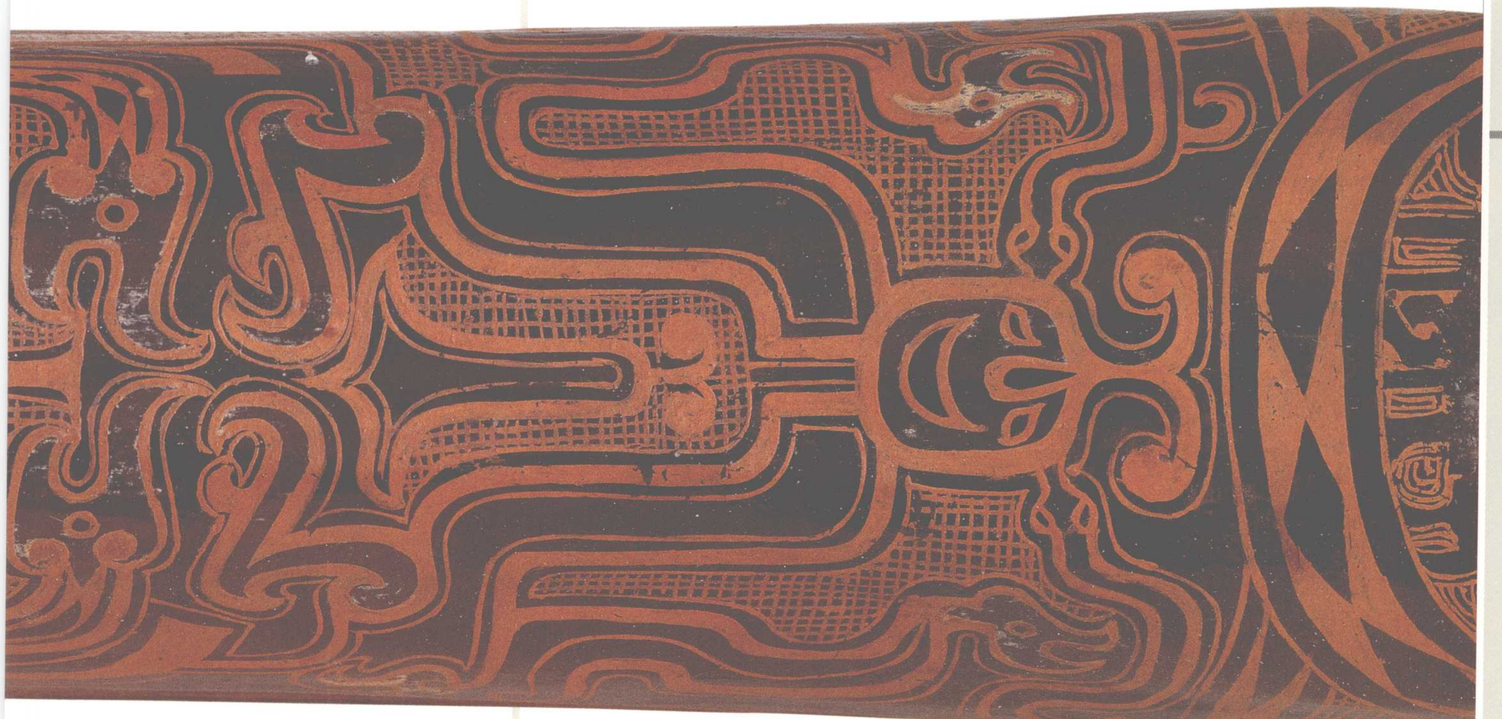
有学者认为，彩漆五弦器是古代为编钟校对音高的仪器“均钟”，其功能相当于现在的音叉和校音器。《国语·周语》载“王将铸无射，问律于伶州鸠。对曰：律所以立均出度也。古之神瞽考中声而量之以制，度律均钟。”韦昭注：“均者，均钟木，长七尺，有弦系之，以均钟者。”

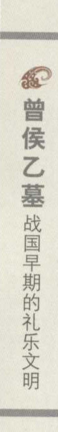






均钟纹饰展开图
Colored lacquer patterns on the five-stringed instrument







素漆十弦琴

Ten-stringed instrument in plain lacquer

通长67、宽19cm

弹奏乐器。出自东室。由琴身与活动底板组成，琴身中空为音箱，出土时弦已朽佚。据两端弦孔和栓弦柱，原器施十弦。此琴文献未载，在考古发现中前所未见。



曾侯乙墓的乐队组合配置表

The configuration of the instruments in Marquis Yi's tomb

	乐器名称 Name
中室：宗庙乐队（24人）Central chamber: band for the ancestral temple (24 players)	编钟 Set-bells
	编磬 *Bianqing*
	建鼓 *Jiangu* drum
	篪 *Chi*
	箫 *Xiao*
	笙 *Sheng*
	瑟 *Se*
	扁鼓 *Biangu* drum
	有柄鼓 Handled drum
东室：寝宫乐队（10人）Eastern chamber: band for sleeping quarters (10 players)	瑟 *Se*
	十弦琴 Ten-stringed *qi*
	五弦琴 Five-stringed *qi*
	笙 *Sheng*
	悬鼓 Hanging drum



件数 Number	演奏人数 Number of player(s)
65	5
32	1
1	1
2	2
2	2
4	4
7	7
1	1
1	1
5	5
1	1
1	1
2	2
1	1

中国乐队：从远古到先秦
Chinese Band till the Pre-Qin Period

《尚书·虞书·益稷》里为我们描绘了一幅远古时期音乐家的表演场面，表演的节目叫《箫韶》，提到了鸣球、搏拊、琴、瑟、鼗、鼓、笙、镛、石（磬）、柷、敔等乐器，其中柷、敔的声音是控制表演的开始和结束的信号。

迄今所知最早的乐器组合发现于山西陶寺文化(公元前2500–前1900年)遗址3002号墓出土的鼍鼓、石磬、土鼓3件乐器的组合。商代人们开始把乐器编排起来，以增强音乐的感染力。殷墟妇好墓出土有青铜编铙、石编磬和埙，是最早的“金石之乐”的组合。

周代有严格的礼乐制度，比如仪式和宴飨时用乐，乐队以钟、磬为核心，配合各种管弦、打击乐器。曾侯乙墓的乐器组合分为两部分，前者以中室的钟、磬为主，合115件，组成宗庙乐队，演奏庄严、凝重、舒缓的宗庙乐及其他仪式音乐，即所谓“金石之乐”。后者以东室的琴、瑟为主，合10件，组成寝宫乐队，演奏舒缓、柔和的祭祀音乐和优美、轻快的民间音乐，即所谓“房中乐”。

Shangshu, an ancient book of history, contains a description of an ancient band playing a piece named *Xiaoshao* with various instruments, such as *qin, se,* drum, *sheng, qing,* zhu and *yu*, the last two being used to mark respectively the beginning and end of a piece.

The oldest band heretofore known consisted of three instruments two drums and a *qing*, which were discovered in Tomb 3002 at the site of Taosi Culture (2500~1900 BC) in Shanxi. In the Shang Dynasty instruments began to played together to produce better music. The bronze cymbals, *bianqing* and *xun* discovered at Fuhao Tomb at the Yin ruins formed the oldest band of metal-and-stone music .

The instruments in Marquis Yi's tomb form two groups. Those in the central chamber, bells and *qing* accompanied by 115 wind, string and percussion instruments, form a band playing the metal-and-stone music fit for sacrifices in the ancestral temple and other ceremonies. Those in the eastern chamber, 10 instruments dominated by *qin* and *se*, formed a band for sleeping quarters, used to play slow, gentle sacrificial music or sweet, lively chamber music.

漆木器

我国使用漆器的年代很早，考古发现在距今7000年的河姆渡文化时期已有漆器。因其不易保存，战国以前的漆器仅有零星发现。
曾侯乙墓出土的漆木用具（不计漆木乐器、兵器的杆、盾、漆甲胄等）共有230多件，是先秦墓葬出土最多的。器类有食具（杯、盘、勺、豆）、用具（盒、箱、梳、架、桶）、仪式用器（俎、案、禁）以及葬具漆棺等。制作特点较为厚重，多是剜凿而成。以食具为例，没有楚、秦、汉墓中常用的卷制、镟制。纹样风格是既有简练的线条勾勒又有精工彩绘的神话故事，如在漆棺和鸳鸯盒上绘制的漆画，它们表现出了融合中原和南方文化的艺术特点。



Wooden Lacquered Articles

Lacquered articles started to be used in China in the Hemudu Culture period 7,000 years ago. Being difficult to preserve, few lacquered articles dating from earlier than the Warring States Period have been discovered.
More than 230 wooden lacquered articles (excluding musical instruments, handles of weapons, shields and lacquered armor) were unearthed from the tomb of Marquis Yi of Zeng, surpassing the number of lacquered articles from any other pre-Qin tomb. They fall into four categories: tableware (cups, plates, ladles and *dou*), articles for daily use (cases, chests, combs, racks and buckets), ritual vessels (*zu*, *an* and *jin*), and coffins. Thick and heavy, most of them were whittled or chiseled out of entire blocks of wood. Take the tableware for example, they are unlike the ones made by rolling or latching methods found in tombs dating from the Chu State, the Qin or Han Dynasty. The decorations include both simple lined patterns and elaborate colored pictures of mythology, the latter being found on lacquered coffins and a mandarin-duck-shaped case. This indicates the combination of the artistic features of Central China culture and those of South China culture.

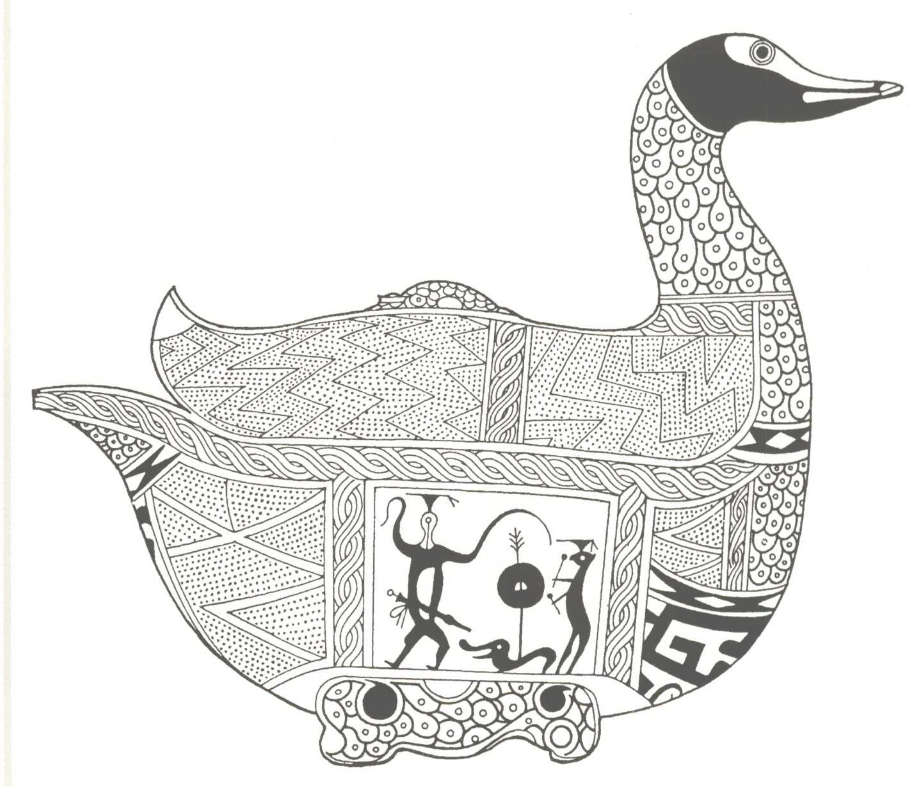


彩漆木雕鸳鸯形盒

Painted lacquer wooden mandarin-duck-shaped case

通高16.5、身长20.1、身宽12.5cm

用具。出自西室陪葬棺。腹部两侧分别绘有撞钟与击鼓舞蹈图案，是反映中国古代音乐舞蹈及绘画艺术的罕见的材料。





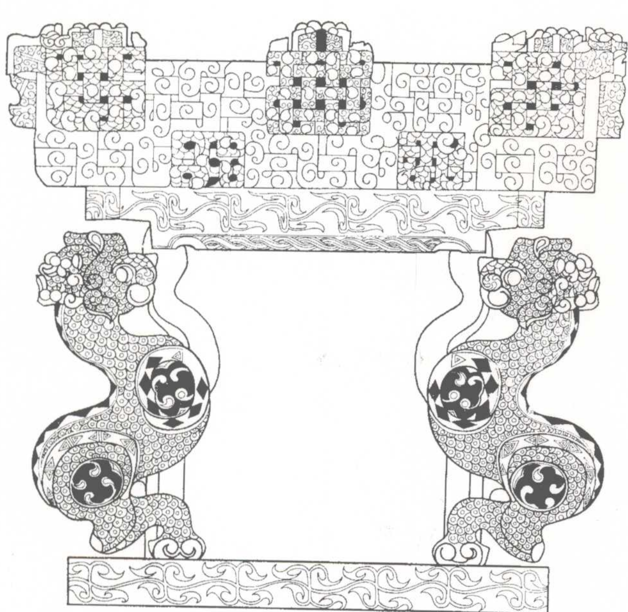
彩漆木雕梅花鹿

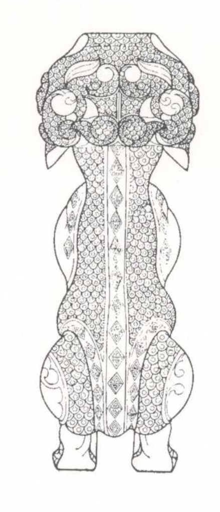
Painted lacquer wooden sika deer

通高77、身高27、身长45cm

出自东室，与笙、瑟同处，头插真鹿角，其腿部有一方孔，可能是安装木鼓的榫眼。







漆透雕禁纹饰示意图 Designs of the openwork lacquered *jin*

漆透雕禁

Openwork lacquered *jin*

全器通高52、面长宽均55、底座长宽均41.8cm

用具。禁面由整块厚木板雕凿而成。禁面阴刻云纹并加朱绘，四角各浮雕两龙，四腿圆雕成兽形。禁座绘云纹、草叶纹，兽形禁足绘鳞纹和涡纹。全身以黑漆为地，朱绘花纹。

漆双耳筒杯

Lacquered double-eared cup

通高16.2、通宽24、口长11.7、口宽10.1cm



漆瓒

Lacquered *zan*

通高8.3、通宽20.1、口长11.7、口宽8.2厘米

瓒是带圭形柄的杯子，用于古代的祼祭礼（以酒祭地），有玉、青铜、木等质地。该器饰云纹，杯身两侧分别有圭形柄和耳。



彩漆木雕龙凤纹盖豆

Wooden *dou* coated in colored lacquer, with a lid adorned with a dragon-and-phoenix pattern

通高24.3、口长径20.8cm

盛食具。盛放腌菜、肉酱等调味品的器皿。





彩漆木雕龙纹盖豆

Wooden *dou* coated in colored lacquer, with a lid adorned with dragon pattern

通高28.3、口长径21.6cm

盛食具。盛放腌菜、肉酱等调味品的器皿。



彩漆浮雕兽面纹木案

Lacquered table with a beast-face pattern in relief

高44.5、长137.5、宽53.8cm

用具。案面浮雕兽面纹，案腿为鸟形。



彩漆杯形器

Colored lacquer cup

高11.2、径11.8cm

用具。器底有两穿孔，用途未明。



“二十八宿图”彩漆衣箱

Suitcase with pattern of twenty-eight constellations

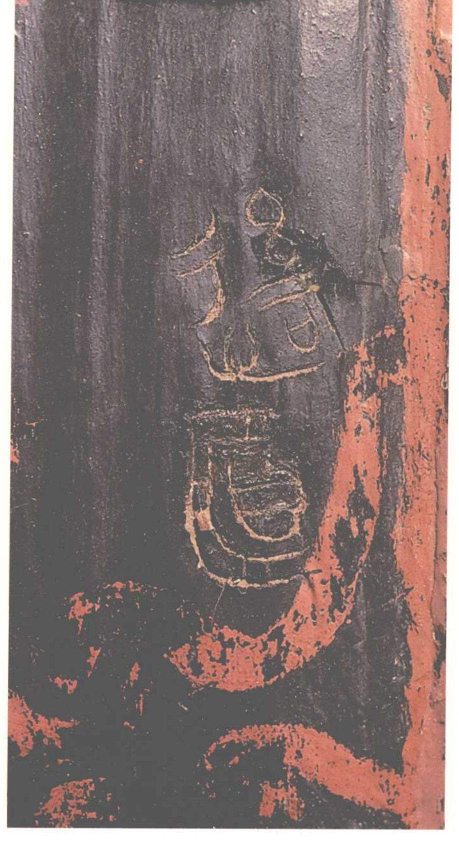
高40.5、长71、宽47cm

用具。衣箱的盖面正中写有篆文“斗”字，象征北斗七星；环绕“斗”字，书写二十八星宿星名，两边分别绘有龙与虎的图像，在亢宿附近刻写“甲寅三日”四字。这说明在战国初期，我国已形成二十八宿体系，并有与北斗配合使用的鲜明特点。

衣箱盖面
Lid of the suitcase







衣箱铭文
Inscriptions on the suitcase

“后羿弋射图”彩漆衣箱

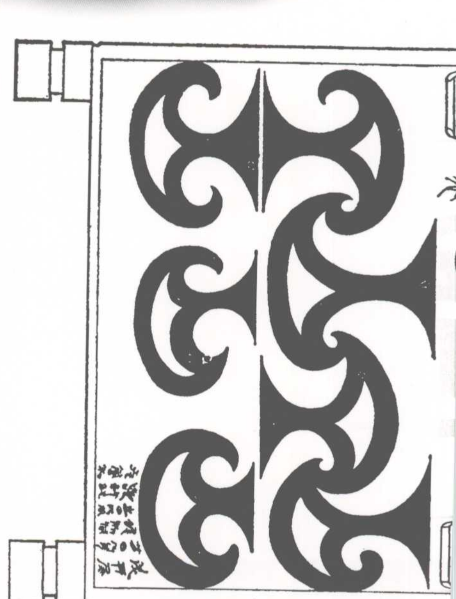
Suitcase with pattern of Houyi shooting suns

高37、长69、宽49cm

用具。中国古代传说唐尧时代“十日并出，焦禾稼，杀草木，而民无所食”，尧乃命后羿射下了九个太阳，从而拯救了人类。衣箱的盖面所绘两幅弋射图表现了后羿射日的情景。在弋射形象的边缘还绘有两条双首人面蛇（枝头蛇），反向互相缠绕，这可能是传说里的伏羲和女娲。箱面另有漆书20字：“民祀唯房，日辰于维，兴岁之驷，所尚若陈，琴瑟常和。”意为民间祭祀房宿（天驷星），可风调雨顺。









衣箱盖面及其局部
Lid and part of the suitcase





金器玉器



在已发掘的先秦墓葬中，过去很少发现金器。此墓东室内出土了金盏、漏匕、金杯、金镇、金带钩共9件，还出土了大量用于装饰的金箔。其中重2156金盏是先秦最重的金器。

墓中出土的玉、石、水晶、紫晶、料器等535件，其中玉器320件，绝大多数出自主棺。玉器制作精美，采用了平雕、透雕、阴刻等多种雕刻技法。种类有璧（bì）、琮（cóng）、璜（huǎng）、玦（jué）、佩、玉剑、玉人和玉小动物、串饰等。它们按功能可分成用编联起来象征身份的“组佩”和保存尸体不朽的葬玉两类。

Gold and Jade Ware

Few gold wares had been discovered in previously excavated pre-Qin tombs. In this tomb, however, nine gold articles were found in the eastern chamber, including bowls, strainers, cups, weights and belt hooks. Also unearthed was a great deal of gold foil used for decoration. One of them, a cup weighing 2,156 g, is the heaviest pre-Qin gold ware ever found.

320 jade articles and 215 articles made of stone, crystal, amethyst and glass were unearthed, the vast majority of which were from the principal coffin. The jade articles are exquisitely made, featuring a variety of carving techniques. They fall into the following categories: *bi* (round jade with a hole in the middle), *cong* (square jade with a hole in the middle), *huang* (semi-circular pendant), *jue* (penannular ring), *pei* (pendant), sword, human figure, little animal figure, and stringed ornament. They perform two types of functions, being either used in combination as status symbols, or used to preserve the body from decaying.



金杯

Gold cup

通高10.65、底径6.3cm
重789.93g

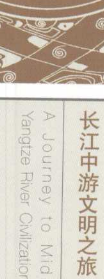
金盏、漏匕

Gold bowl and gold strainer

盏通高11、口径15.1、盖径15.7cm，重2156g
漏匕通长13、匕宽3.4cm，重56.45g

食具。全器饰蟠螭纹、绹纹、雷纹、涡云纹等，是已出土先秦金器中最重的一件。出土时内置镂空金漏匕一件，匕面镂空成变异的龙纹。









金镇

Gold weight

通高2.8、直径9.5cm，重327.65g

用具。镇顶有环纽。器身饰变形龙纹、重环纹、变形龙凤纹、云纹等。

谷纹玉环

Jade *huan* with grain patterns

直径9cm

璧是周代礼玉六瑞（即璧、琮、圭、璋、璜、琥）之首，用以礼苍天。曾侯乙墓出土玉璧共67件。





云纹玉环

Jade *huan* with cloud pattern

直径4cm



双龙玉璧

Jade *bi* with double-dragon pattern

长7.2cm

透雕龙纹玉璜

Jade *huang* with openwork dragon patterns

长16、宽4.7cm

全器共透雕出四龙六蛇。曾侯乙墓中出土玉璜较多，共有49件（大多成对），其中由三道金缕穿联的金缕玉璜；透雕出四龙六蛇的透雕龙纹玉璜均是罕见珍品。





金缕玉璜

Jade *huang* stringed by gold threads

长11.8、宽2.7cm

由三道金缕穿联大小两件玉璜组成。



云纹玉璜

Jade *huang* with cloud patterns

长11.1、宽2.1cm

两面雕刻云纹。





玉玦

Jade *jue*

直径5–5.2cm

玉环有缺为玦。古人以为“君子能决断则佩玦”。新石器时代用作耳饰，商周则与环、璧等连成组佩。



兽面纹玉琮

Jade *cong* with beast-mask patterns

高5、宽6cm

琮出现于新石器时代，外方内圆，上下贯通，方代表地，内圆代表天，是用于沟通天地的法器。



玉龙佩

Jade dragon-shaped pendant

长11.6、宽6.5—6.8cm



玉方镯

Square jade bracelets

长7.1、径6.2cm

共出土2件，均置于墓主人腰部。



双龙玉佩

Jade double-dragon pendant

长12.1、宽4.9cm

两龙尾相背。双面阴刻云纹。





双龙玉佩

Jade double-dragon pendant

长5.9、宽4.2cm

器身透雕对称的两条卷龙。

鱼形玉佩

Jade fish-shaped pendant

长6.6、宽1.8cm



谷纹卷龙玉佩

Jade coiled dragon pendants with grain pattern

长9cm

鸟形玉佩

Jade bird-shaped pendant

长9.3cm





虎形玉佩

Jade tiger-shaped pendant

长9.6cm



四节龙凤纹玉佩

Jade dragon-phoenix pendant in four parts

长9.5cm

四节龙凤纹玉佩由一块玉料雕琢成可以活动卷折的四节，共雕刻出七条卷龙纹、四只凤鸟纹和四条蛇纹。此器出自墓主腹部，器形与众佩不同，可能是单独佩带的。





十六节龙凤纹玉挂饰

Dragon-phoenix pendent in 16 parts

通长48cm

全器用五块玉料、三个玉环和一根玉销钉雕成可以活动卷折的十六节，采用了透雕、浮雕、阴刻等技法雕成龙纹三十七条、凤纹七只和蛇纹十条，并饰有谷纹、云纹、斜线纹，出土时位于墓主头部，可能为冠上的玉缨（帽带）。

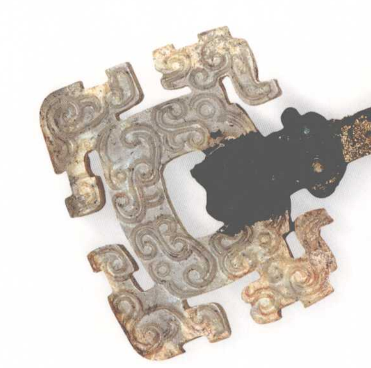


云纹玉梳

Jade comb with cloud pattern

长9.6、宽6.5cm

梳有二十三齿，双面阴刻云纹和斜线纹。







玉首铜刀

Bronze knife with a jade head

通长22.3cm

刀身青铜质，首为青玉，四角各有一透雕的龙形装饰。

玉剑

Jade sword

通长33.6、宽5.1cm

全器分为剑首、剑茎、剑格、剑鞘、剑珌等，用金属连接。其中剑首透雕成双龙形。战国时虽已出现装在铜剑上的玉质剑饰，而剑上（铜、铁剑）的玉首、玉格、玉彘俱全而被称为玉具剑，此剑已通体用玉，是所见中国最早、最完整的玉剑。



玉韘

Jade *she*

长4.3、宽3.4、高1.1cm

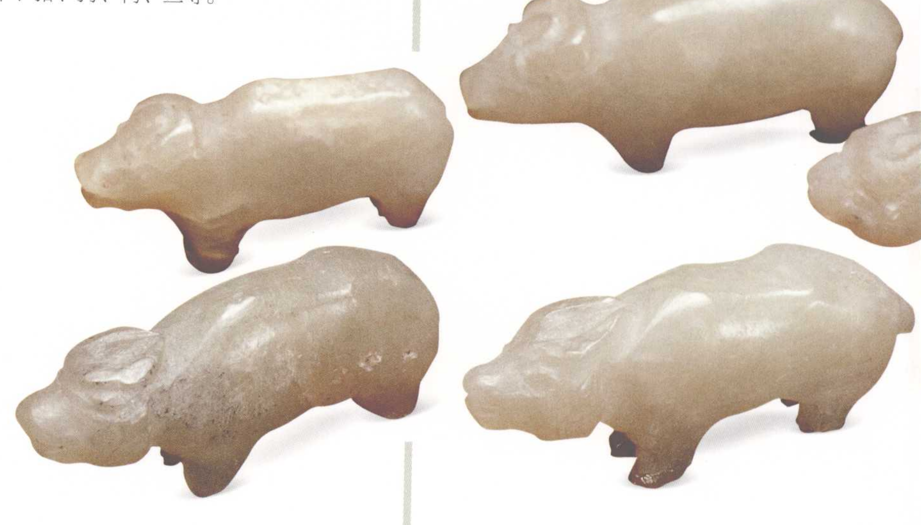
韘初见于商代，流行于先秦两汉，为骑射之具，套于拇指上使用，张弓时，弓弦挂住旁出的小钩，以防伤拇指。后来成为装饰品。

玉琀

Jade *han*

长1.4—2.2cm

古人相信玉可以保护尸体不腐烂。曾侯乙墓共出土葬玉64件，有琀、口塞、握、玉瞑目、半琮。玉琀出自墓主的口腔。器形有牛、羊、猪、狗、鸭、鱼等。



玉握

Jade *wo*

高4.8cm

葬玉。出自墓主的两手处。







兵器 车马器

曾侯乙墓出土兵器戈、矛、戟、殳、弓、箭、盾、甲胄等4777件（包括4507件箭镞），大部分出自北室，少量出自东室。许多兵器刻有铭文。这批兵器中的“殳”和多戈戟是考古发现中仅见或少见的兵器。

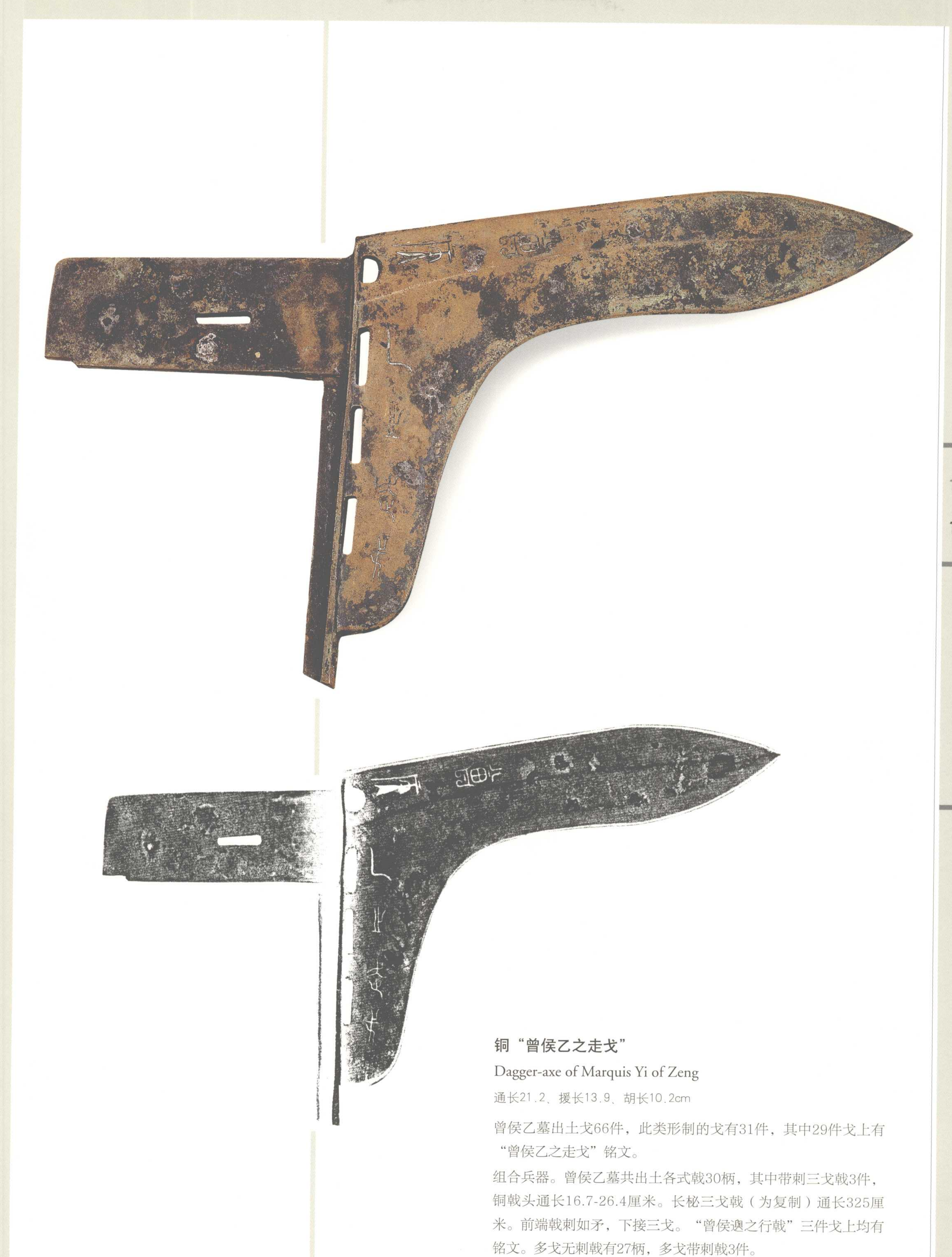
曾侯乙墓出土车马器包括车舆、华盖、车軎、马衔、马镳、马饰等1127件。分别出自东室和北室。车軎共出土76对，成对的有70件。有的车軎上有错金纹饰，个别的有铭文。两件矛状车軎是用于增强战车战斗力的新型车具。



Weapons and Chariot Parts

From the tomb were unearthed 4,777 weapons (4,507 arrowheads included), including dagger-axes, spears, halberds, *shu* (weapons made of bamboo), bows, arrows, shields and armor. Most of them were found in the northern chamber, and the rest were found in the eastern chamber. Many of them have inscriptions. The *shu* and the halberds with several dagger-axes are rare archeological finds.

1,127 chariot parts were unearthed, including cabins, canopies, *wei* (chariot axle blade), gag bits, bridle bits, and horse ornaments. They were found in the eastern chamber and the northern chamber. 152 *wei* were found, 140 of which are in 70 pairs. Some of them have inlaid gold patterns, and a few of them bear inscriptions. There are two chariot axle blades, which were new inventions used to make the chariot more lethal in combat.



铜“曾侯乙之走戈”

Dagger-axe of Marquis Yi of Zeng

通长21.2、援长13.9、胡长10.2cm

曾侯乙墓出土戈66件，此类形制的戈有31件，其中29件戈上有“曾侯乙之走戈”铭文。

组合兵器。曾侯乙墓共出土各式戟30柄，其中带刺三戈戟3件，铜戟头通长16.7-26.4厘米。长柲三戈戟（为复制）通长325厘米。前端戟刺如矛，下接三戈。“曾侯邎之行戟”三件戈上均有铭文。多戈无刺戟有27柄，多戈带刺戟3件。



长柲三戈戟

Long-handled halberd with three dagger-axes

通长32.5cm

曾侯乙墓因保存条件较好，矛、殳、三戈或双戈戟等长柲兵器都完整地保存了下来。柲一般长300-440厘米，它以八棱木杆为芯，每个棱面贴宽1厘米左右的竹片，外面密缠丝线、革带或藤皮，再髹红漆或黑漆。长柲兵器刚柔相济，平滑坚韧，不易折断，适宜车战。



铜错金“曾侯乙之用戟”

Halberd inlaid with gold and commissioned by Marquis Yi of Zeng

通长15.6–25.4cm

上、下两件戈有错金鸟篆铭文“曾侯乙之用戟”七字。



铜“曾”字徽记三戈戟

Halberd with three dagger-axes and marked with the character *zeng*

通长16.5—24.4cm

三件戈上均有“曾侯乙之用戟”七字铭文，最上一件戈内后部阴刻由龙与兽组成的“曾”字徽记。



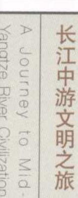
铜“曾侯遡之行戟”

Bronze halberd

通长16.7–23.6cm

该戟为三戈无刺戟，三戈上均有“曾侯遡之行戟”铭文。曾侯乙墓共出土各式戟30柄，其中有铭文者20柄，曾侯遡或是曾侯乙的先君。



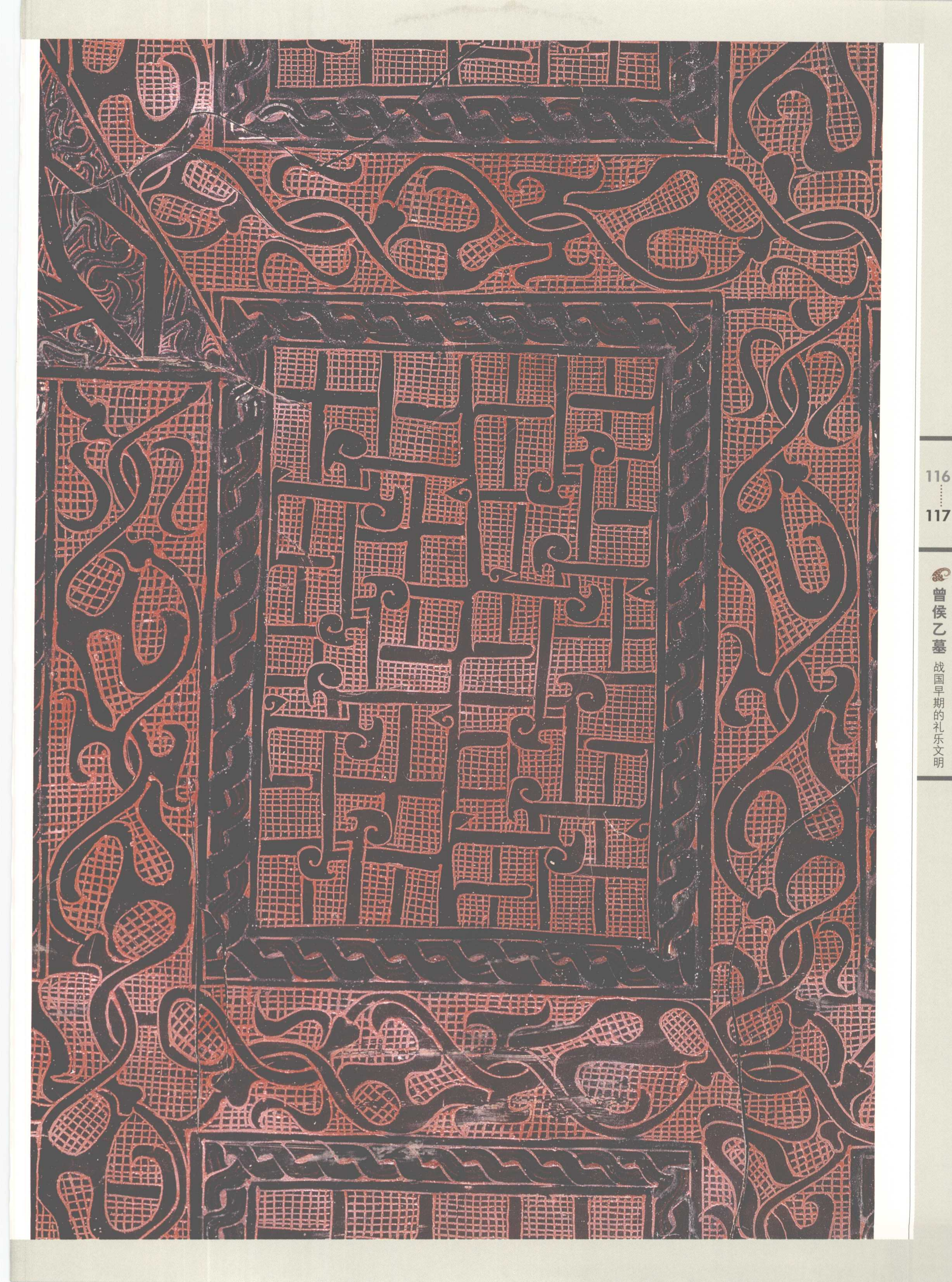


彩漆龙凤纹盾

Shield with colored lacquer dragon-phoenix pattern

高92.5、最宽处55cm

墓中出土盾有49件，有素面和彩绘两种（在遣策甲胄类简中称为革盾和画盾）。彩绘盾的正面也是素面，而在盾的背面彩绘精美繁复的纹饰。





武士甲胄

A suit of armor

甲胄分为胄、身甲、袖甲、裙甲四部分，甲由201片各式皮革甲片用丝带编缀组成。甲片系生皮胎，经模具压制定型，髹深褐色漆2-3层。出土时，皮革和编缀的丝带多朽佚，仅存漆皮，仅个别甲片的穿孔尚存丝带。此套甲胄是经加固后重新编缀的，是迄今中国最早的皮甲胄。

铜“曾侯郕之用殳”

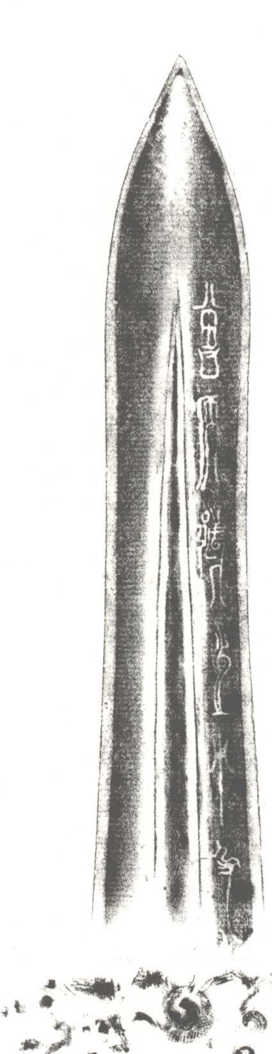
Bronze *shu* of Marquis Yue of Zeng

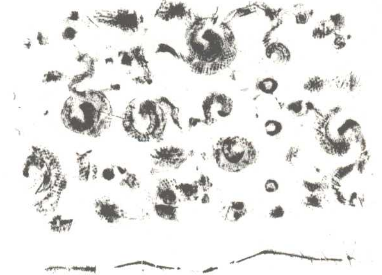
殳头通长17.6、刃长13.8、箍径4.6cm

殳头呈三棱形，八棱形箍饰浮雕龙纹。殳头原装在一根长340、直径3.2厘米的髹漆积竹木柲上，柲的下端装有铜镦。殳头刃部一侧刻有铭文“曾侯郕之用殳”。

殳为周代五兵之一，曾侯乙墓中出土的殳分有刃殳和无刃的晋殳两种，曾侯殳的出土，解决了殳的形制不详问题。









矛状铜车軎

Spear-shaped bronze *wei*

通高41.1cm

矛状铜车軎，装于战车轴端的刀刃，行进时可杀伤近车之敌。这种加刀刃的车有较强的陷阵能力。

玉首铜削

Bronze knife with jade head

通长28.6cm

玉首，环纽为玉质，环身雕琢云纹，环柄衔接处呈龙首形，上嵌绿松石。

长柲殳

Long-handled *shu*

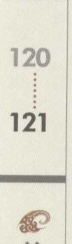
通长327－340cm

兵器。

铜车軎

Bronze *wei*

高8.7cm





记载墓内随葬车马兵甲的墨书竹简

Bamboo slips with words written in ink recording funeral objects in the tomb

竹简长70－75cm

简文墨书，出土时字迹清晰。简文详细记载了用于葬仪的车马兵甲，包括车名、马名、御者及其官职、车构件与配件、马用器具、车与马的配驾、赗赠车马的种类与数量、兵器与甲胄的配置等内容。

后　记 Postscript

《曾侯乙墓——战国早期的礼乐文明》是在湖北省博物馆举办的《曾侯乙墓》陈列的基础上编写的。

曾侯乙墓发掘至今已有三十年，其陈列内容和形式虽几经变化，但该墓所反映的公元前五世纪的音乐文化和战国早期的礼乐文明却始终都被强调。这次展览的设计和图录的编写，补充了有关曾国历史的材料，更正了早先把该墓的文化属性定为“楚文化”的说法，吸收了国内外学者对该墓文物的研究成果，在我馆对该墓文物保护、修复、研究的基础上，更为客观地揭示和展现了曾侯乙墓出土文物在历史、文化、音乐、技术等方面的成就。

这次展览的筹备和本书的编写，得到了各文博、科研单位和学者的帮助与支持，谨向中华世纪坛世界艺术馆的冯光生，上海音乐学院的萧梅，台北故宫博物院的嵇若昕，武汉大学中文系的萧圣中，中国科学院自然科学史研究所的武家璧，中国艺术研究院的崔宪，美国加州大学圣迭戈分校物理系的程贞一（Joseph C.Y.Chen），纽约城市大学的劳镈（Bo Lawergren），欧洲中国音乐研究院的施聂姐（Antoinet Schimmelpenninch）、高文厚（Frank Kouwenhoven）表示衷心的感谢。曾侯乙墓的发掘者、湖北省博物馆原馆长谭维四始终都在关心这次展览的设计，并给予了热情帮助。文物出版社第五图书编辑部为本书的出版付出了辛勤的劳动。中国对外翻译出版公司承担了本书的英文翻译，也特别向高宏、罗红燕、任京霞、陈兆娟、张晓璐和湖北省文化厅的宋乐静表示衷心的感谢。

最后，感谢湖北省财政厅为本书的出版提供了经费支持。

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